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State University of New York at Stony Brook
Group Health Association of America, Inc.
International Resources Group, Ltd.

Health Care Financing in Latin America and the Caribbean

Research Report No. 10

**Health Care Financing
in Latin America and the Caribbean, 1985-89:
Findings and Recommendations**

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Acknowledgements

This is the tenth and final report in a series of research studies under the **Health Care Financing in Latin America and the Caribbean (HCF/LAC)** project, carried out by the State University of New York (SUNY) at Stony Brook under contract with the US Agency for International Development (AID). The four-year contract (1985-89) included sub-contracts with the Group Health Association of America (GHAA), a Washington, DC, membership organization of prepaid health care institutions, and International Resources Group, Ltd., (IRG), a Washington, DC, research and consulting firm. Other entities that participated contractually in HCF/LAC work included Abt Associates, Inc., of Cambridge, MA; PROSALUD of Santa Cruz, Bolivia; SAYTEC of Quito, Ecuador; and IEPD of Santo Domingo, Dominican Republic. The excellent work of these institutional participants is greatly appreciated.

The research and related technical assistance activities carried out in eight countries (**Belize, Bolivia, Dominican Republic, Ecuador, El Salvador, Honduras, Guatemala, and St. Lucia**), as well as annual workshops (in Stony Brook, NY; Quito, Ecuador; Antigua, Guatemala; and Arlington, VA), involved the participation of many researchers, host country health officials, international agency representatives, and other experts. Seventeen authors and editors prepared the project's 10 research reports (listed

on the back cover of this document), and another 10 international consultants and over 30 host country professionals participated directly in research under the project.

AID, as sponsor of the project, participated through the direct involvement of its health officers stationed in the eight countries mentioned above and in Washington, DC. Other international agencies represented at the project's annual workshops included the World Bank, Pan American Health Organization, and Inter-American Development Bank. Work under the HCF/LAC project was coordinated with other AID centrally-funded projects — in particular the REACH project administered by John Snow, Inc. — and with a USAID-funded activity in Bolivia, administered by Management Sciences for Health.

The intensive involvement of so many individuals and institutions has been of great benefit to the project, not only in carrying out the research, but also in subjecting the resulting studies to peer review at the project's annual workshops before final drafts were printed and distributed.

We particularly acknowledge the many contributions to the project as a whole by its Senior Health Scientist, Luis Carlos Gomez; by members of its Advisory Committee: Judy Cahill (GHAA), William McGreevey (World Bank), Philip Musgrove (PAHO), Philip Palmedo (IRG), Allen Randlov (AID), Gerald

Rosenthal (John Snow, Inc.), George Strumpf (HIPGNY), and Ted Weinberg (GHA); by AID's two project managers, Kate Jones-Patron (1985-87) and Patricia Moser (1988-89); by its three Management Officers: Lynda Perdomo Ayala (1985-86), Paulette Chase (1986-88), and Shirley King (1988-89); and by its two research assistants: Chandra Shrestha and Hector Zamalloa.

Finally, we thank Egon Neuberger, Dean of Social Sciences at SUNY/Stony Brook, and Ron Bloom, Vice Provost and Director of International Programs of SUNY's Central Administration in Albany, for their academic support, and the officers and staff of the Research Foundation of SUNY for their administrative support.

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Executive Summary

Health Care Financing in Latin America and the Caribbean (HCF/LAC), a four-year (1985-89) AID centrally-funded project, carried out research and related technical assistance in eight countries — **Belize, Bolivia, the Dominican Republic, El Salvador, Ecuador, Guatemala, Peru, and St. Lucia**. These efforts focused on (1) health care costs: how they should be accounted for, how and why they vary among similar provider institutions, and how they can be controlled; (2) demand for health care: how households respond to self-perceived illness (depending on household characteristics and on physical and financial accessibility of health services) and how much they pay for health care, either directly or through private prepayment plans; and (3) health financing alternatives: how health care expenditures from general tax revenues are (or can be) supplemented with social security revenues, private, prepaid plans, and user fees charged in both public and private health care facilities.

The HCF/LAC project also conducted annual workshops at which its research studies, in draft, were reviewed by LAC health authorities, AID health officers, and expert researchers and advisors. The project's final research reports reflect these peer reviews.

The project began in 1985 with a literature survey and concludes with the present synthesis. Since many other recent surveys of health care financing research

and practical experience exist, the state-of-the-art is already well-documented. This review therefore concentrates on 10 lower-middle-income countries (the eight listed above plus **Jamaica and Honduras**); on the economic, institutional, and policy context of their health care financing issues; on the findings of some 23 research studies of health care costs, demand, and financing alternatives carried out in these countries over the past five years; and on the conclusions and recommendations that emanate from these findings.

Because of the economic crisis that beset most LAC countries over the past decade, public health expenditures have declined, both absolutely and as a proportion of GDP. Even greater has been the deterioration of the quality of public health care. While general tax revenues remain the most important source of health care support, accounting for anywhere from 30 to 80 percent of total health sector financing in the 10 LAC countries reviewed here, these countries tend to assign increasing importance to social security and private sector financing alternatives.

The economic crisis has apparently stimulated private health care spending, which appears to have risen as a proportion of total health sector financing. The World Bank and AID, as the main sources of international health development support, have encouraged the general tendency toward diversification of health sector financing; these donors have

urged public health authorities to reallocate resources from hospital to primary and preventive care and to rely more heavily on alternative sources of financing.

Cost studies at the primary care level have found that the annual total costs of otherwise comparable health centers, as well as the unit costs of services they deliver, vary widely — both within and among subsectors (*i.e.*, public, social security and private). These variations are explainable by differences not only in the centers' efficiency of resources utilization, but also in the variety, quantity, and quality of final services they produce.

Cost studies at the hospital level have found that large facilities account for even bigger proportions of the total cost of public health services than standard expenditure accounts show. Identifying fully-accounted-for facility costs, as well as the unit costs of individual departments and the services they provide, creates a basis for political and management decisions on cost containment, cost recovery, quality improvement and equitable resources allocation.

Studies of the demand for health care show that households — as well as employers, acting for their employees — account for between 20 and 40 percent of total health sector expenditures in the 10 LAC countries reviewed here. These expenditures include direct payments for both public and private care, purchases of medicines, and payments for coverage under private, prepaid plans.

Simulations, based on household survey data, suggest that if user charges for outpatient care in public hospitals were introduced or increased, within reason and with exemptions for the poor, overall health services utilization would not decline significantly; however, many users of public health services would switch to private providers whose services they consider to be of higher quality and/or more readily accessible than public services. Demand for inpatient care more strongly favors public facilities, because they are in more ample supply than private hospitals and because private hospitalization charges are not affordable by most households. Demand studies also show that even very low-income households make some payments for health care (especially medicines), but that most of the cost of the health care they need must be borne by providers that are publicly funded or supported by private charitable sources.

Studies of health care financing alternatives emphasize the important role that social security plays

in financing medical care, especially in Latin American countries. In the seven Latin American countries reviewed here, medical care under social security accounts for 20 to 30 percent of total health sector expenditures; in the three Caribbean countries, social security programs contribute up to 10 percent (Belize, St. Lucia) or nothing at all (Jamaica). In all 10 countries, social security mainly covers urban middle income workers and their dependents, although a rural program in Ecuador demonstrates that coverage can be extended to agricultural communities as well. The cost of medical care under social security is generally higher than the cost of public or private health services, and yet many beneficiaries consider the quality of this care also to have deteriorated in recent years.

Studies of private, prepaid health plans show that these alternatives are still emergent, but in some areas are already an important component of total health sector financing. Private, prepaid plans include insurance plans (individual and group policies) as well as employer-, community-, and provider-managed plans. Lima and Santo Domingo, where these plans account for about 10 percent of total coverage, are the leading examples of their potential for providing coverage in large urban areas. In a few smaller cities and agro-export areas, employers (or employer organizations) and communities (or cooperatives) are providing ambulatory care financed by prepaid plans and/or user fees. Some of these plans demonstrate the potential for expansion of ambulatory care, but they generally do not provide for inpatient care (except normal deliveries).

Based on these findings, it is recommended that international health development support continue concentrating on public health care, but also broaden its scope to include assistance to medical care programs under social security. Between them, these two subsectors account for two-thirds or more of total health sector financing in the LAC countries reviewed here, and they have the main responsibility for providing health services for the low and middle-income population.

Cost containment in these government-financed and operated programs should emphasize increases in productivity and improvements in quality. User fee payments (subject to means tests) and charges to patients' private, prepaid plans should be viewed as reducing the implicit subsidy of providing relatively affluent users of government services with free care,

and generating additional revenues for more medicines, better maintenance, and other means of productivity and quality enhancement.

A cost containment strategy should initially target large hospitals operated by ministries of health and social security institutions, because their total costs are even greater than standard expenditure accounts show. Two main elements in such a strategy should be to limit the personnel budget to a share of total expenditures that allows appropriate budgetary allocations to other critical line items (medicines, maintenance, etc.), and to redirect routine ambulatory care from hospitals to primary health care facilities.

Private health care financing alternatives should be supplementary to, and supportive of, government-

funded and operated health services in the countries reviewed here. Households and employers already contribute a large share of total health care spending, aside from the taxes they pay to support government services, and to some extent they do so because they consider government programs deficient in quality and accessibility. Private health care financing alternatives, however, should not be assumed to be inherently more efficient and equitable than government services. The development of these alternatives should be facilitated so that government programs can concentrate more of their resources on primary health care and essential hospital services that are of good quality, readily accessible, and available free of charge (or at nominal fees) to their target populations.

Glossary of Acronyms

- AEP** Appropriateness Evaluation Protocol, an objective instrument for assessing the appropriateness of hospital use
- AID (AID/W)** the US Agency for international Development, located in Washington, DC (see also USAID)
- ALOS** Average length of (hospital) stay
- BZ \$** Belizean dollar
- CARICOM** Caribbean Community, the Caribbean common market organization
- DRG** Diagnostic Related Groups, treatment categories used for hospital cost estimation
- EC \$** Eastern Caribbean dollar
- ENNSA** Encuesta Nacional de Nutricion y Salud, the 1984 National Nutrition and Health Survey of Peru
- FFS** Fee-for-service
- FIDES** Fundacion Integral de Desarrollo, a Bolivian development organization
- GDP** Gross Domestic Product
- GHA** Group Health Association, Inc., a Washington, DC, HMO
- GHAA** Group Health Association of America, a Washington, DC membership organization of prepaid health care institutions
- HCF/LAC** Health Care Financing in Latin America and the Caribbean, an AID/W centrally-funded project implemented by SUNY/SB
- HFA/2000** Health for All by the Year 2000, the World Health Organization/UNICEF sponsored Declaration of Alma Ata
- HIPGNY** Health Insurance Plan of Greater New York
- HMO** Health maintenance organization
- HSA-Peru** Health Sector Analysis of Peru, a 1985-86 sector-wide, USAID-funded study implemented by SUNY/SB
- IDB** Interamerican Development Bank
- IDSS** Instituto Dominicano de Seguridad Social, the Dominican Social Security Institute

IEPD	Instituto de Estudios de Poblacion y Desarrollo, the Dominican Institute of Development and Population Studies	PRITECH	Technologies for Primary Health Care, an AID/W centrally-funded project implemented by MSH
IGSS	Instituto Guatemalteco de Seguridad Social, the Guatemalan Social Security Institute	PROSALUD	Proteccion a la Salud, a non-profit, USAID-sponsored, private sector Bolivian health care delivery network in the state of Santa Cruz, Bolivia
IPSS	Instituto Peruano de Seguridad Social, the Peruvian Social Security Institute	PUJ	Pontificia Universidad Javeriana, Colombia
IRG	International Resources Group, Ltd., a Washington, DC, research and consulting firm	PVO	Private Voluntary Organization
ISSA	Integrated System for Survey Analysis, a computer program	REACH	Resources for Child Health, an AID/W centrally-funded research project implemented by JSI
JSI	John Snow, Inc., an Arlington, VA, research organization	SAYTEC	Private research firm, Quito, Ecuador
LAC	Latin America and the Caribbean	SEGEPLAN	Secretaria General del Consejo Nacional de Planificacion Economica, the General Secretariat of the Guatemalan National Council of Economic Planning
LDC	Less developed country	SESPAS	Secretaria del Estado de Salud Publica y Asistencia Social, the Dominican State Secretariat of Health and Social Services
MCH	Maternal and Child Health	SPSS	Statistical Package for the Social Sciences, a computer program
MOH	Ministry of Health	SS	Social Security
MSCI	Medical Services Corporation International, an Arlington, VA, research organization	SSB	Social Security Board, Belize
MSH	Management Sciences for Health, a Boston, MA, non-profit research organization	SSC	Seguro Social Campesino, Ecuador's rural social security program
NGO	Non-governmental Organization	SUNY	State University of New York
NIS	National Insurance Scheme, the St. Lucian social security organization	SUNY/SB	State University of New York at Stony Brook
OECS	Organization of Eastern Caribbean States	URC	University Research Corporation, a Chevy Chase, MD, research organization
PAHO	Pan American Health Organization	USAID	United States Agency for International Development; this acronym is normally used to refer to the Agency's missions located in developing countries
PHC	Primary Health Care	WHO	World Health Organization
PREMI	Program for Reduction of Maternal and Childhood illness, a USAID-supported child survival program of the Ecuadorian Ministry of Health		
PRICOR	Primary Health Care Operations Research, an AID/W centrally-funded project implemented by URC		



Introduction

This report brings to a conclusion a four-year (1985-1989) research and technical assistance project entitled **Health Care Financing in Latin America and the Caribbean (HCF/LAC)**. Funded by the LAC Regional Bureau of the US Agency for International Development (AID), the project carried out research and provided related technical assistance in eight Latin American and Caribbean countries, where it focused on three topics: the fully-accounted-for costs of health care, household demand for health care, and the feasibility of alternatives to the financing of health care from general tax revenues. These topics, all of them AID policy priorities, reflect two major convictions of the Agency: first, that resources limitations and organizational inefficiency have imposed severe constraints on the effective expansion of public health services in the LAC region; and second, that cost containment measures, together with increased cost recovery through user fees and prepaid risk-sharing mechanisms, will be needed to help the region's lower-middle-income countries achieve the universally accepted goal of "Health for All by the Year 2000."

A. Usefulness of Health Care Financing Studies

1. *Cost studies.* Typically, cost studies create databases for use by institutions (e.g., health minis-

tries), programs (e.g., mass vaccination campaigns), or individual facilities (e.g., public clinics). The costs of institutions, programs, or facilities (or the services they provide) should be "fully accounted for," that is, they should include physical capital, administrative overhead, and operating costs. The resulting estimates of total costs — including the costs of inputs (such as personnel and supplies) and the average and marginal costs of service outputs — have many applications: for example, user fee schedule revision (based on the average costs of services), staff productivity assessment (based on comparisons of factor input with service output costs), or budget preparation (based on the identification of controllable vs. noncontrollable costs at each level of authority).

More broadly, cost studies can yield data on cost variations (among institutions and/or for the same institution over time) and their determinants. Identifying these is essential for improving financial management and implementing cost control measures. Finally, cost studies provide a context within which the financial implications of specific policy options — for example, whether or how to expand population coverage — can be assessed at the national, sectorial, subsectorial, or institutional level.

2. *Demand studies.* Demand studies, based on household survey information, not only help to identify current utilization of health services; through

computer simulations, they also estimate changes in demand in response to changes in the variables that affect it. Health officials can use this information to determine what additional resources (real and financial) are needed to meet policy objectives, how best to allocate existing and/or additional resources, and how consumers' perceptions of the quality of the services offered affect their use.

The increasing policy interest in the issue of user charges, especially for currently free public health services, provides a good example of the practical usefulness of demand analyses: they can simulate the effects, on both consumers' utilization of services and health facilities' direct revenue generation, of price changes — before policy decisions are made. Other potential policy decisions, affecting (for example) the quality of care or the location or staffing of facilities, can also be tested — prior to their implementation — through demand analysis.

3. *Alternative financing studies.* Alternative financing studies are needed because of the limited availability of general tax revenues for health care financing. Such studies can assess the efficiency and equity of different ways of allocating public and private resources, define the respective responsibilities of the public and private health subsectors in the financing and delivery of health care, and identify and evaluate new sources of health financing, including ways to encourage users to pay directly for their health care. Examples of alternative financing mechanisms fall into four broad categories: social insurance, private insurance, other prepayment arrangements, and user fees.

B. HCF/LAC Project Implementation

The HCF/LAC project began its work in 1985 with an extensive survey of the health care financing literature relating to the three priority topics on which it was to focus. This survey resulted in a review paper (Russell and Zschock 1986), a preliminary draft of which was discussed in depth at the first of four annual project workshops attended by LAC health officials and AID health officers as well as project staff, consultants, and advisory committee members.

Subsequently, project staff and consultants were invited to visit eight LAC countries (Belize, Bolivia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Peru, and St. Lucia). In each, they provided short-term technical assistance and identi-

fied research studies in support of specific host country and AID objectives.

These visits resulted in the design and implementation, under HCF/LAC auspices, of eight research studies — two in the Dominican Republic and one in each of the other countries visited except for El Salvador, where a study identified under the HCF/LAC project is being carried out under another AID centrally-funded project. The eight HCF/LAC studies add up to a well-balanced menu of studies in AID's three priority areas: three are on the costs of health care, two on household demand for health care, and three on alternative health care financing mechanisms (see Appendix I for a list of all documents generated in the course of the HCF/LAC project; see Appendix II for brief summaries of the eight HCF/LAC country studies). Follow-up technical assistance was provided in all eight countries — in some cases, directly by the HCF/LAC project; in others, through other AID centrally-funded projects (REACH, PRITECH) or with funds provided by USAID Missions.

The specific inspiration behind each of the eight HCF/LAC studies varied:

- the cost studies (undertaken in Ecuador, Belize, and St. Lucia) all resulted from host country government requests to the respective USAID Missions for research and technical assistance to help in cost containment and cost recovery efforts;
- the studies of alternatives to the financing of health care from general tax revenues (Bolivia, Guatemala, and Peru) originated with the respective USAID Missions' need for research and technical assistance: in Bolivia, to provide a market analysis to help PROSALUD — an AID-funded network of private primary health care (PHC) facilities — become financially self-sustaining; in Guatemala, to explore the potential economic and managerial viability of private PHC delivery in the country's agro-export sector and to make recommendations for USAID support of such initiatives; and in Peru, to provide USAID with a systems analysis of urban health care financing alternatives for possible diversification of the Mission's future health sector support;
- a similar need in the Dominican Republic prompted the Mission there to request a household survey-based health care demand analysis, except that in this case host country public health officials shared the Mission's sense that such an analysis would fill an important information gap in the overall context within which health services in Santo Domingo are planned.

The first and last of the project's 10 reports are devoted to two objectives: to review and synthesize related research and present recommendations. The first report, mentioned above, contained not only a literature review but also a number of policy and research recommendations. The present (and final) report updates the first one, focusing on research studies carried out since the HCF/LAC project's 1985 inception. A draft of this final report was thoroughly discussed and checked for completeness and accuracy by 33 participants at the project's Final Meeting, held in Washington, DC, in June, 1989 (see Appendix III for list of Final Meeting participants and their institutional affiliations).

C. Role of LAC Participants

As a matter of principle, the HCF/LAC project's research studies were all designed and implemented in close cooperation with host country experts: both researchers and — to the extent possible — local health authorities. Collaboration with local authorities in the design and field research stages of the studies was particularly close in five countries. Three of these were the countries in which cost studies were carried out (Ecuador, Belize, and St. Lucia), since the requests for these studies originated with the respective ministries of health. A fourth was Bolivia, where the leadership of PROSALUD worked closely with HCF/LAC project staff and consultants. And in the Dominican Republic, which yielded two HCF/LAC reports, both the household survey and the subsequent analysis of the demand for health care were, from beginning to end, closely collaborative efforts of host country researchers associated with IEPD, a local research institution, and HCF/LAC project staff and consultants, under the guidance of an intra-sectorial review committee of public and private health authorities and USAID Mission officials.

Researchers and potential users of each of the eight HCF/LAC country study reports were substantially involved not only in the design and fieldwork stages of the research but also in reviewing preliminary drafts of the reports, thus assuring the accuracy and usefulness of the final versions. The preliminary drafts of all eight HCF/LAC country study reports were reviewed at a series of workshops, held in Quito, Ecuador, in 1987; in Antigua, Guatemala, in 1988; and in Santo Domingo, Dominican Republic, in 1989 (the last of these was funded not by the project but by USAID/Dominican Republic). At each workshop,

participants included host country health officials and researchers, AID health officers, those project consultants who had participated in the studies under discussion, project staff, and advisory committee members. The workshops served the twin functions of subjecting all HCF/LAC draft reports to a thorough peer review, and familiarizing all participants with the design, findings and recommendations of each study.

D. HCF/LAC Final Report

After reviewing over 200 documents reflecting recent health care financing research undertaken in both LAC and non-LAC countries, the co-authors of this final HCF/LAC report concluded that the incorporation of research findings pertaining to the economically more advanced countries of the LAC region, as well as to the less advanced countries of Africa and the Pacific Basin, would not only overlap with the material presented in the initial HCF/LAC report; more importantly, it would also require considerations of comparability (or lack thereof) that would weaken the focus and objectives of the present report. We thus decided to limit this report to 10 LAC countries that represent AID's priorities for health policy implementation in the region, and from which results of health care financing research carried out over the past four years are available.

This final report thus focuses on the seven countries in which the HCF/LAC project implemented its eight country studies, plus El Salvador, Honduras, and Jamaica. For our purposes, these countries are readily and usefully comparable. All are lower-middle-income, as defined by the World Bank (see Table 1) — that is, their *per capita* incomes range between about US \$500 and US \$1500. All suffered severe economic recession in the early to mid-1980s. With the exception of Peru, all have small populations, which is generally assumed to leave them even more exposed to the vicissitudes of international economic conditions than larger countries that can rely to a greater extent on domestic market demand to stimulate economic growth.

Prior to the preparation of this final report, we reviewed all documentary sources in the HCF/LAC project library, undertook an extensive search of the bibliographies of recent reviews and individual research studies for additional reference materials, and solicited information — from USAID Missions, the World Bank, IDB, PAHO, and several AID

Table 1

POPULATION AND ECONOMIC INDICATORS FOR SELECTED LAC COUNTRIES

Country	Population Size (1)	Population Growth (2)	GNP/ Capita (3)	Change in GDP/Capita (4)		
				1981-84	1985	1986
Belize	0.2	n.a.	1,170	•••	2.2 (1965-86)	•••
Bolivia	6.6	2.7	600	-5.2	-2.8	-5.5
Dom. Rep.	6.6	2.4	710	0.4	-6.4	0.3
Ecuador	9.6	2.9	1,160	-1.3	1.6	-0.1
El Salvador	4.9	1.2	820	-3.8	0.7	-1.0
Guatemala	8.2	2.9	930	-4.0	-3.7	-2.4
Honduras	4.5	3.6	740	-3.1	-0.3	-0.6
Jamaica	2.4	1.5	840	-0.1	-5.9	0.7
Peru	19.8	2.3	1,090	-3.5	-0.1	5.8
St. Lucia	0.1	n.a.	1,320	•••	2.3 (1965-86)	•••

(1) in millions, mid-1986; (2) annual average, in percent, 1980-86; (3) in US dollars, 1986; (4) average annual rate of change. Sources: Data for columns (1)-(3) from World Bank, *World Development Report 1988*, Tables 1 and 27; also, Box A, p. 289, for columns (1), (3) and (4) for information on Belize and St. Lucia. Data in columns (4), except for Belize and St. Lucia, from Inter-American Development Bank, *Economic and Social Progress in Latin America, 1988 Report*, Table II-5.

contractors (JSI, MSH, Urban Institute, URC) — on relevant studies still in progress or recently completed. From the more than 200 documents reviewed, we selected 84 that, in our opinion, contain those research methods, findings, conclusions, and policy recommendations most pertinent to our primary objective of updating the initial HCF/LAC project document by synthesizing recent LAC health care financing research. The 84 documents are listed in the Bibliography, where, for easier reference, they have been differentiated as "Guides and Reviews" of the literature (designated, in the Bibliography, by the letter G); "Health Systems and Policy Studies" (P); and studies dealing specifically with "Costs," "Demand," and "Alternative Financing" mechanisms (C, D, and A).

Twenty-three recent studies, distinguished by asterisks in the Bibliography, seemed particularly important to the goals of this final report: all contain the results of original research, undertaken in one of the 10 countries reflected in this report, in one or more of AID's three policy priority areas. Most of these "fo-

cal" studies were supported by AID, including the nine produced under HCF/LAC project auspices.

Our review of the literature proved that there is no shortage of health care financing guides and reviews. We identified 28 such documents, starting with the 1978 World Health Organization technical report *Financing of Health Services*, which can be credited with initiating the growing policy concern, over the past decade, with health care financing and sustainability issues. Perhaps the most comprehensive of these syntheses is a 1986 review and annotated bibliography that also summarizes current policy issues (Hoare and Mills 1986). Our selection of health care financing guides and reviews also includes some that focus specifically on costs (Reynolds and Gaspari 1985; Robertson 1985; Jimenez 1987; REACH 1987), demand (Akin *et al.* 1985; Bitran 1988), and alternative financing (Brenzel 1987 and Stinson 1982 on primary health care financing alternatives; Griffin 1988 on user charges; GHAA 1985 on prepayment mechanisms in the LAC region; and Zschock 1986 on

social security financing of medical care in Latin America). The HCF/LAC initial review (Russell and Zschock 1986) remains a useful survey of all three of these areas, but particularly so of alternative health care financing studies and policy issues.

A synthesis such as this one cannot possibly do full and equal justice to all the documents on which it is based. For a more thorough understanding of the methods, findings, and implications contained in the 84 sources listed in the Bibliography, we refer the reader to the original documents. Neither can a synthesis purport to be (much less to remain) completely up-to-date. In general, this report reflects the "ethnographic present" — the facts at the time of fieldwork. In some instances, new data have become available since the distribution of the original documents on which this report is based. We have changed or updated our information only in those cases in which

there is some important policy implication to be drawn from the new data.

E. Organization of Report

The larger context of LAC economic conditions, health sector evolution, and donor agency health policies is reviewed in Chapter II, which provides the background for findings on costs, demand, and financing alternatives in the health sector. The research methods used in the HCF/LAC studies are described in Chapter III, while findings from the 23 focal studies are summarized in Chapters IV-VI. Conclusions and recommendations, addressed to LAC health authorities, USAID Missions, and AID/W and other organizations and individuals involved in international health policy and program support and coordination, are presented in Chapter VII.

II

Context

Over the period 1985-1989, when most of the research studies reviewed in this report were carried out, the 10 countries on which this report concentrates continued to experience the effects of the serious economic crisis that has affected the whole LAC region since the early 1980s. Yet very few of the research studies reviewed here were explicitly designed to analyze their topics with reference to the economic crisis and its impact on the health sector; only the regional studies sponsored by PAHO (Musgrove 1987a, 1988) and the USAID-funded 1985-1986 Health Sector Analysis of Peru (Zschock 1988) specifically deal with the impact of the crisis on the health sector. It is clear, however, that — among the reasons for carrying out most of these studies — the impact of the crisis on health care financing was an important one. Another reason was a pervasive sense that the organization of the health sector in LAC countries was changing (or should change), and that the corresponding implications for the financing of health services needed to be better understood.

This chapter provides the context in which the research studies reviewed in this report were carried out. It outlines macro-economic conditions, organizational changes within health systems, and the health policies of international donor agencies — specifically those of the World Bank and AID —

that have guided health sector support over the past decade.

A. Economic Context

Resource constraints and problems of inefficiency affecting public health services became a growing concern during the 1980s, as LAC countries — with the assistance of international donor agencies — sought to expand PHC coverage at the same time that national economies were beset by declining growth of output and increasing domestic and international debt. Economic growth, which had averaged 5.9 percent annually between 1971 and 1980 for the LAC region as a whole, became negative in the early 1980s, and has only partially recovered in recent years (Table 2).

Among the Andean countries, Bolivia and Peru suffered severe recessions in 1981-83. By 1986, the economy of Bolivia had still not recovered, and Peru's brief economic upswing was cut short by the onset of hyperinflation. Ecuador's oil boom of the 1970s ended at the turn of the decade, and economic growth has been sluggish since then, with a reversal in 1987 as a result of the severe damage caused by an earthquake in January of that year. The Dominican Republic and three Central American countries — El Salvador, Guatemala, and Honduras — also experi-

Table 2

GROWTH OF GDP, SELECTED LAC COUNTRIES, 1971-86
(Average annual rates, in percent)

	1971-80	1981-83	1984	1985	1986
Bolivia	4.5	-3.4	-0.3	-0.2	-2.9
Dom. Rep.	6.9	3.7	0.5	-4.2	2.6
Ecuador	8.9	0.7	4.2	4.5	2.8
El Salvador	3.2	-4.4	2.3	2.0	0.6
Guatemala	5.7	-1.8	0.5	-1.0	0.4
Honduras	5.5	-0.2	2.8	3.2	2.7
Jamaica	-0.8	2.0	-0.9	-4.5	2.1
Peru	3.8	-2.8	4.8	2.5	8.5
LAC*	5.9	-1.0	3.6	3.4	3.9

Source: Inter-American Development Bank, *Economic and Social Progress in Latin America, 1988 Report*, Table II-5.

*Average of 25 LAC countries.

Note: The source from which this table is drawn does not include data for Belize and St. Lucia. While other sources provide corresponding data, inconsistencies among sources are such that combining them in one table is not advisable.

enced declines in GDP at the outset of the 1980s, as world market prices for several of their agricultural products dropped sharply. El Salvador also suffered the economic consequences of an earthquake in 1986. None of these four countries has seen any real recovery since then. Jamaica's economy has performed poorly throughout the past two decades.

In most of these countries, unfavorable economic conditions have undermined the public policy objective of expanding primary health care through ministries of health, and have also caused the deterioration of many existing public health services. Levels of public health care spending (defined, in national income accounts, as spending primarily through ministries of health; medical care programs funded under social security are not included) are shown in Table 3, in the form of health expenditures as a proportion of GDP. A comparison of Tables 2 and 3 suggests that this proportion has tended to decline as countries' GDP growth rates slowed and turned negative in various years. It should also be noted that the effect of declining financial commitments to public health is further aggravated by population growth, which

reduces *per capita* health care expenditures, in absolute terms, even more than these relative data indicate.

Bolivia, whose public health expenditures averaged slightly more than one percent of GDP throughout the 1970s, reduced this amount to less than half of one percent in the 1980s. Peru — its economic crisis notwithstanding — has maintained public health expenditures at about one percent of GDP throughout the two decades. Ecuador, which had made a major policy commitment to public health starting in the mid-1970s, sustained a two percent level of expenditure until the mid-1980s, but has recently reduced public health spending to only one percent of GDP.

Guatemala's financial commitment has fluctuated considerably, but also averages around one percent of GDP, while in the Dominican Republic, public health expenditures have declined recently from the 1.5 to two percent range to one percent. El Salvador and Honduras, however, have fairly consistently spent the equivalent of about 1.5 percent of GDP on public health (with a recent increase to two percent in Honduras).

Table 3

PUBLIC HEALTH EXPENDITURE AS A PERCENTAGE
OF GROSS DOMESTIC PRODUCT, SELECTED LAC COUNTRIES, 1976-86

	1976	1980	1981	1982	1983	1984	1985	1986
Bolivia	1.0	1.7	1.0	0.4	0.4	0.5	0.4	n.a.
Dom. Rep.	1.8	2.0	2.1	1.2	1.1	1.2	1.0	1.0
Ecuador	1.4	1.8	2.1	2.2	2.0	1.9	1.1	1.1
El Salvador	1.4	1.5	1.6	1.4	1.4	1.4	1.2	n.a.
Guatemala	0.8	1.6	1.1	1.4	0.7	0.8	0.7	1.0
Honduras	1.9	1.4	1.5	1.6	1.6	1.5	2.0	2.6
Jamaica	3.1	3.8	3.6	3.8	3.5	2.9	2.9	n.a.
Peru	1.1	1.1	1.1	0.9	1.0	1.0	1.0	n.a.

Source: Inter-American Development Bank, *Economic and Social Progress in Latin America, 1988 Report*, Table IV-8.

n.a. = not available.

Note: The source from which this table is drawn does not include data for Belize and St. Lucia. While other sources provide corresponding data, inconsistencies among sources are such that combining them in one table is not advisable.

Jamaica's relatively high levels of public health expenditures (Table 3) cannot be compared with the Latin American countries' lower levels, since Jamaica does not provide health care through social security arrangements. Each of the Latin American countries, in addition to supplying health services through its ministry of health, also provides medical care through its social security system, at a level of financing approximately equivalent to its public health expenditures (Zschock 1986). Thus, with a few exceptions, combined public sector spending on health has tended to be between two and four percent of GDP. (Jamaica spent between three and four percent of GDP on public health in the early 1980s, but these outlays have declined in recent years and now approximate the country's three percent level of the late 1970s.)

The data in Table 3 show that during the 1970s — a period of strong economic growth — public health spending tended to account for a relatively high proportion of GDP in the LAC region, but during the 1980s — a period of economic recession — public health spending has tended to fall as a proportion of GDP. Comparable trend data for medical care expenditures under social security are not available. One

can assume, however, that these are even more directly affected than public health spending by changes in economic conditions. The reason is that social security revenues — mandatory wage-based contributions by employers and employees — probably vary more sharply with changes in economic output than the general tax revenues that fund public health services.

The effects of economic recession on health care financing involve a chain reaction, with some lags. Typically, reductions in economic output result initially in investment cutbacks, temporarily cushioning the effect of recession on consumption (*i.e.*, recurrent) expenditures (this tends to be true of the economy as a whole as well as the health sector). In the long run, however, decreased investment has a greater negative effect on economic growth — and on health services expansion — than a temporary reduction in recurrent expenditures in a period of adverse economic conditions. As unemployment rises and household incomes decline, the demand for public health services provided free or at nominal user fees may increase. At the same time, however, public services may deteriorate as maintenance of hospitals and PHC facilities, as well as equipment repairs or replace-

ments, are postponed. Recurrent expenditures are also curtailed — primarily, however, at the expense of facilities maintenance and supplies rather than wages, benefits and pensions. The quality of services is thus likely to deteriorate even more than recurrent expenditures decline.

The impact, on public health expenditures, of the LAC countries' economic recession of the early 1980s has been analyzed by Musgrove (1987a) under PAHO auspices. His conclusions reflect the expected pattern:

- overall, as well as in the health sector, public investment expenditures were curtailed more sharply than recurrent expenditures, cushioning the immediate impact of the region-wide recession on health services delivery;
- on a *per capita* basis, however, recurrent public health expenditures declined in most LAC countries;
- among recurrent expenditures, salaries, fringe benefits and pensions for public health employees increased proportionately, while the budget shares of pharmaceuticals and other expendable supplies shrank;
- although little is known about the impact of economic recession on private health expenditures, it appears that "when income declines, private total medical spending falls more than proportionately" (*ibid*:431), thus increasing the demand for public health services.

In 1985-86, the impact of the economic recession on health care expenditures in Peru was analyzed, in detail, in a USAID-funded, sector-wide study, the Health Sector Analysis of Peru (HSA-Peru) (Zschock 1988). In general, the findings from this study support Musgrove's conclusions for the LAC region as a whole:

- recurrent expenditures, as a proportion of total ministry of health spending, increased from 86 percent in 1980 to 90 percent in 1984, while investment in health facilities and equipment declined from 14 to 10 percent of the total;
- wages, benefits and pensions, as a proportion of total MOH recurrent expenditures, increased from 62 percent in 1980 to 78 percent in 1984, while the proportion of supplies (including pharmaceuticals) dropped from 24 to 17 percent;
- total pharmaceutical sales (public and private) dropped by 18 percent in value and by 37 percent in terms of units sold between 1980-1984, and sales of

essential medicines to the public health and social security medical care programs — about a fourth of total pharmaceutical sales in Peru — dropped by half;

● social security expenditures for medical care, which represented about a third of total health sector spending in Peru, were more volatile than public health spending: they declined more sharply than public health spending, but recovered their pre-recession level sooner than did those of the MOH. (This finding is supported by a subsequent study that shows social security revenues and expenditures in Peru to be highly cyclical; see Petrera Pavone 1987.)

One important finding of the HSA-Peru, however, diverges from Musgrove's observation that private health expenditures decline even more than public health spending in times of economic recession:

● private health care expenditures in Peru were estimated, in the HSA-Peru, to have increased, in both relative and absolute terms, during the country's economic recession in the early 1980s. While public health spending declined from 37 to 33 percent of the health sector total between 1980 and 1984, the private subsector's share of total health sector expenditures increased from 29 percent in 1980 to about 33 percent in 1984. Even in absolute terms, private sector spending for health care increased during Peru's economic recession.

A more recent PAHO analysis of the recession's impact on public health expenditures (Musgrove 1988) concludes that public health expenditures in the LAC region contracted roughly in parallel with overall central government expenditure reductions during the economic crisis. This suggests that — during this time of presumably increased basic human need for public health services — such services were considered neither less important than other public services nor deserving of relatively greater allocations.

B. Health System Context

1. *The private subsector.* While some private medical services have always been available in the urban areas of the LAC region, expansion of these services was given impetus in the 1970s, in several countries, by the introduction of private health insurance and other collective arrangements. These

prepayment mechanisms have now reached significant levels of private health care financing and population coverage in several metropolitan areas.

Private ambulatory care as a proportion of total outpatient services far exceeds the use of private hospitals as a proportion of total inpatient care, because inpatient care is much more costly than outpatient care; users of private ambulatory services may thus resort to public facilities when they require hospitalization. Because they have had to recover most of their cost through direct user charges, private hospital facilities have been relatively few. Over the past decade, however, the demand for private hospital care has increased as a result of the growth of private health insurance, health plans operated directly by major employers, and a few prepaid provider plans. These third-party payment mechanisms reduce the prices paid by beneficiaries for inpatient care, although the cost of insurance coverage still limits access to private facilities to those with relatively high incomes.

In Colonial times, private charitable organizations, called *beneficencias* in Latin American countries, established hospitals at which the poor received care at no charge. Today, the private health subsector still includes a nonprofit component, whose services are provided through a proliferation of NGOs and PVOs. Most are funded by international charitable organizations; others by indigenous cooperatives. Some of these services, however, have become quasi-public operations, in that their medical staffs are paid by ministries of health, although other recurrent costs are typically paid from international donations and user fees (see, e.g., Zschock 1988).

Most sales of pharmaceuticals also take place through the private sector. Public sector essential medicines programs generally account for only a small proportion of total production and sales of pharmaceuticals, leaving most users of public health services with only one option: to purchase their medicines from private sector pharmacies that primarily sell brand-name products.

In the rural areas of the Latin American countries, the private sector also includes many practitioners of "traditional" medicine — healers and midwives — for whose services households pay directly, either in cash or in kind.

2. The social security and public subsectors. In most Latin American countries, the beginnings of medical care programs funded and operated by social security institutions date back to the period after

World War I, while most ministries of health were created only after World War II. Today the former, funded by wage-based contributions, cover employees working in the modern sector, while the latter, funded from general tax revenues, have a three-fold responsibility: to serve as policy-making and regulatory bodies for the health sector as a whole, to promote and deliver preventive health care for the entire population, and to provide free curative health services for low-income population segments (Roemer 1986).

General revenue taxes (levied on imports and exports, domestic sales, and personal and corporate incomes) are the single most important source of financing for health services in the LAC region. As mentioned earlier, however, spending under the medical care components of social security programs in the lower-middle-income Latin American countries nearly equals public health expenditures, although the target populations of social security programs are much smaller than those of ministries of health. In the English-speaking Caribbean countries, social security programs have a more limited role in health care financing. Some make payments to the ministry of health, while others provide no medical care benefits at all. Like Great Britain, these countries have opted for a predominantly public sector health services system, funded primarily from general tax revenues (Hoare and Mills 1986).

The expansion of primary health care, a policy developed and pursued under PAHO auspices in all LAC countries since the early 1970s, is generally regarded as a responsibility of ministries of health (Zschock 1980). In addition, in several Latin American countries, hospitals for the poor, supported by *beneficencias*, also became the responsibility of the public sector when they were given over to newly-formed ministries of health in the 1960s and 1970s. These twin burdens — to expand primary health care and also support secondary and tertiary health care facilities — have caused ministries of health in most of the Latin American countries to become increasingly inefficient, particularly as they have had to cope with severe budget constraints at the same time that the costs of many health services inputs (e.g., wages and benefits, pharmaceutical supplies) have greatly increased.

3. National health systems. The very generalized profile of LAC health systems provided above varies from country to country (see Zschock 1980, 1986, and country-specific sources where noted). For some

countries, very little health system documentation is available; except for Belize, El Salvador, Honduras, Jamaica, and Peru, where USAIDs have sponsored recent health sector resources analyses, there have been no international donor-sponsored health financing assessments, in the countries reviewed here, during the present decade. The following summaries briefly describe health sector characteristics in the ten countries that provide the foci for this report.

- **Bolivia** provides health services under social security and ministry of health programs. The private health sector still lacks prepayment plans, except for health services provided by large employers such as some of the extractive industries. Many small NGOs and PVOs provide primary care, and an experimental network of private PHC services in Santa Cruz, whose development has been supported by USAID, is increasingly successful in self-financing from user fees; this model is being considered for implementation in several other urban centers (Rosenthal *et al.* 1988).

- In **Peru**, MOH services account for slightly less than a third of total health sector expenditures. The medical care program of the country's social security institute accounts for another one-third. A diversified private sector consists of various NGOs (many of which are heavily dependent on public subsidies and international support), many individual fee-for-service practitioners, and an expanding segment of private risk-sharing plans in the Lima/Callao area. Together, these private sector alternatives account for most of the balance of total health sector expenditures (Zschock 1988).

- During the 1970s, **Ecuador** made a strong commitment to public health care with the construction of a network of regional and local hospitals operated by the MOH. Together with the even more recent expansion of PHC, this growth explains the increase in public health expenditures as a proportion of GDP noted above. Medical care is also provided under two social security programs — an urban program and a semi-autonomous rural program that provides basic health services funded, in part, by user prepayments. In the country's two principal cities, private sector care is beginning to include prepayment arrangements. NGOs play only a minor role in the Ecuadorian health sector.

- Both **El Salvador** and **Honduras** have relatively large public health programs, but only very limited provision of medical care under social security. Both have received large foreign aid infusions

over the past decade to help expand public health services. Individual private practice medicine is limited to the major urban areas, with no risk-sharing arrangements yet in evidence. In both countries, many NGOs provide primary and hospital services (USAID/Honduras 1980; for El Salvador, see Fiedler 1986).

- **Guatemala's** health system is predominantly public, with 90 percent of the country's health services provided by the MOH and social security institute. However, government financing of health care is limited, and services are concentrated in the capital and major cities. Private health services now include an emergent health insurance industry and many NGOs, but their physical facilities are concentrated in the capital city. In rural agro-export areas, some private health services are provided through producers' organizations (Gwynne 1988).

- The **Dominican Republic** has extensive public health services, but only a relatively small medical care program under social security. There is an unusually large for-profit private sector in Santo Domingo, the capital, offering fee-for-service care as well as prepayment plans. Health insurance coverage is expanding in Santo Domingo (see Ramirez *et al.* 1986; Gomez 1988).

Central government expenditures in the English-speaking Caribbean countries tend to be larger shares of GDP because of these countries' predominantly public health care systems. Correspondingly, public health expenditures also represent more sizable proportions of GDP (as is evident in Table 3 for Jamaica). Most of these countries have social security organizations, but only some of them provide medical care benefits. Private health insurance is available, but most of the Caribbean countries are too small to sustain extensive prepayment arrangements (Jeffers *et al.* n.d.).

- In **Jamaica**, the public sector accounts for two-thirds of total health expenditures, but most of the MOH budget is spent on secondary and tertiary care. In 1981, private spending for health care represented about one-third of total health sector spending. Most of this spending was for PHC and most was out-of-pocket, but approximately one-fourth represented health insurance payments. Since then, there has been some expansion of private alternatives, including at least one HMO. The Government of Jamaica — facing deteriorating public health facilities and insufficient funding because of declining general tax revenues, and encouraged by foreign donor agencies

— has begun to implement privatization of public hospital support services (e.g., laundry, catering), and to charge user fees in public hospitals. Social security funds in Jamaica do not provide medical services (see Garrison *et al.* 1985; Rice *et al.* 1985; Hamilton and Hinchcliffe 1988; Lewis 1988b).

- In Belize, the public and private sectors account for almost equal proportions of estimated total health sector expenditures. A social security program makes a small annual lump-sum contribution to the public health budget for medical care coverage of enrollees injured on the job. The MOH operates the country's only large hospital, as well as several small rural hospitals. There are currently two small private hospitals operating in Belize city. Agro-export interests (e.g., the Banana Control Board) operate PHC services for their workers and families (USAID/PAHO 1982; Raymond *et al.* 1987; Colon *et al.* 1989).

- In St. Lucia, public health services represent about five percent of GDP, an amount that includes an annual lump-sum contribution from the country's social security program to provide coverage for its enrollees. Public funds support the national hospital and two smaller hospitals, and provide a substantial subsidy of about half the budget (including staff salaries) of a quasi-public hospital — a government-owned facility run privately by a religious organization. The relatively small private health subsector consists of physicians who see patients at private offices (and sometimes at the national hospital) on a fee-for-service basis; private health insurance is available, but has limited coverage (see Russell *et al.* 1988; Jeffers *et al.* n.d.).

Several general observations can be made on the basis of this brief review of LAC health systems:

- the post-World War II evolution of the health sector in the 10 LAC countries on which this report focuses has tended to favor a dominant public sector. Ministries of health are responsible for sector-wide planning, policy formation, and regulatory functions, as well as for the general promotion of preventive health services, and for personal health services for the medically indigent;

- however, ministries of health are insufficiently funded for fulfilling these responsibilities, especially in recent years of economic crisis and dwindling general tax revenues, during which they have also been saddled with heavy cost burdens of hospital care;

- in the Latin American countries, although the financing of medical care under social security ap-

proximately equals the amount of general tax revenues allocated to ministries of health, social security beneficiaries represent a smaller proportion of the population than the MOH target population. Of the English-speaking Caribbean countries, several use social security revenues to help fund health services through ministries of health (e.g., Belize, St. Lucia); others (e.g., Jamaica) do not;

- in Latin America, coordination between public health services and medical care under social security, promoted by PAHO, has been effectively implemented in several of the more advanced countries of the region (e.g., Brazil, Costa Rica, Panama), but it has not progressed in the lower-middle-income countries reviewed here;

- private health services began to expand, appreciably in some countries, in the mid 1970s. In part, this expansion has been due to deficiencies in social security medical care programs, and in part it has been in response to perceptions of poor quality care in public health facilities. To a considerable extent, however, the expansion of private health care has also been the result of expanding employment and rising incomes in the modern sector — and, HCF/LAC studies suggest, of the imposition of user fees in the public sector (see Chapter V, below);

- private health insurance and other prepayment plans, sponsored by employers or health services providers, have emerged in the last decade as important sources of financing and coverage in several urban areas (e.g., Lima, Santo Domingo);

- NGOs and PVOs, some sponsored internationally and others indigenously founded by cooperatives, have taken the place of the *beneficencias* that in earlier decades were important sources of privately-funded health care for the poor. Like the *beneficencias*, however, many NGOs/PVOs have become dependent on national governments or international donor agencies for much of their support, thus limiting the extent to which they represent private sector alternatives to government financing of health care. Also, since most NGOs/PVOs require user payments or membership contributions, they are not likely to be financially accessible to the countries' medically indigent populations, unless they are heavily subsidized.

C. Donor Health Policy

Both AID and the World Bank initiated their support for health services development in the mid-

1970s. AID began to provide direct support for primary health care programs at that time; the Bank limited its support to the inclusion of health components in loans in other sectors until 1980, when it changed its policy to include direct health sector lending. Meanwhile, AID's support for public health programs continued, but the Agency also increasingly promoted cost recovery (e.g., user fees, prepayment plans) as alternatives to the predominant reliance, in LAC countries, on general tax revenues for the expansion of PHC. Throughout the last two decades, the Interamerican Development Bank (IDB) has also been a source of loans and technical assistance grants in the health sector, but the IDB has not contributed to the policy debate on health sector priorities.

1. *AID health financing policy.* By 1982, AID had concluded that comprehensive PHC programs were not improving coverage or achieving reduced morbidity and mortality, particularly among children. It therefore instituted its own more narrowly focused child survival strategy, emphasizing a few specific interventions but also continuing general health systems support. AID policy mandates, however, that health financing concerns should be addressed in all health projects.

According to the 1986 AID health policy statement (AID 1986a), the maintenance of child survival gains requires revising national policies to promote two financing goals: cost containment through increased efficiency in public health services delivery, and greater involvement of the private sector in the mobilization of financial resources and delivery of child survival services. Beyond its priority concern for child survival and directly related financing issues, AID also envisions using health financing alternatives to help support the development of sustainable health care systems. Toward this end, "the Agency is giving special attention to research on improved approaches to financing health care..., particularly in middle-income countries (AID 1986a:7).

Another AID document, *Health Financing Guidelines* (1986b), provides more detail on the Agency's policy concerns with cost containment, resources mobilization, resources allocation, and health sector organization. The guidelines' primary objective is to encourage LDCs to develop sustainable, cost-effective health programs in response to three basic problems: inefficient use of existing health resources (financing, facilities, personnel, and supplies), inadequate domestic financial resources mobi-

lization, and inequitable distribution of existing resources. The guidelines do not attempt to pinpoint the causes of insufficient public sector resources, but do specifically identify user fees and insurance mechanisms as the means to supplement public health care financing from general tax revenues. They note, however, that "full cost recovery" (i.e., the total financing of health services from sources other than general tax revenues) is not the goal of AID's health financing policy.

To accompany the mobilization of financial resources other than general tax revenues, the AID guidelines call for several specific measures, including greater cost containment based on improved cost-effectiveness of health services delivery; reduced delivery of PHC at hospitals and greater reliance on health centers and posts; and introduction of cost accounting mechanisms at health care facilities. Potentially the farthest-reaching measure to contain public health expenditures (though not necessarily unit costs) is "to shift the responsibility and costs of providing most personal curative services from the public sector to those willing and able to pay in the private sector" (AID 1986b:11).

Many of the practical issues involved in implementing the AID health financing guidelines were discussed at the Agency's bi-annual LAC region health officers' meetings in 1984 (MSH 1984) and 1986 (Birch and Davis 1986). The 1984 meeting aired concerns that user fee and community financing requirements would have a limited impact on public health budgets, and might possibly interfere with the implementation of child survival program objectives. These concerns notwithstanding, the AID health officers agreed that greater reliance on social security and private sector financing and health care delivery alternatives were crucial to the implementation of the Agency's health sector assistance strategy in the LAC region.

Meeting again in 1986, the LAC region health officers agreed that user fees should be promoted only if their expenditure can be directly linked with improvements not just in the quantity but also in the quality of care provided, and again expressed concern that the implementation of the recently-issued health financing guidelines, because of their emphasis on cost recovery through user fees, might conflict with the implementation of the child survival strategy. In view of the general lack of information, in the LAC region, on households' health care seeking behavior and willingness to pay for services, either directly or through insurance mechanisms, the health officers

identified a need for health care demand studies. The experience with AID projects that address health financing objectives, reflected in the health officers' observations at these two meetings, is summarized in two recent surveys (Lewis 1987a; REACH 1989).

2. World Bank health financing policy. In 1980, in conjunction with its decision to lend directly for health sector projects, the World Bank initiated a series of policy studies on health care financing. Its 1980 *Health Sector Policy Paper* (World Bank 1980) called attention to the typically low levels of efficiency and effectiveness of public health services in developing countries.

Soon afterwards, the director of the Bank's newly-formed Population, Health and Nutrition Department, Dr. John R. Evans (Canada's former Minister of Health), together with two advisors, prepared a far-ranging diagnosis of LDC health problems and needs (Evans *et al.* 1981). Going beyond the earlier policy document, Evans *et al.* focused on opportunities for central governments — in the face of a "continuing scarcity of public resources" (*ibid.*: 1122) — to supplement current sources of health services financing by mobilizing support from other sources. For middle-income countries, Evans recognized social security institutions as integral to the financing of health care, particularly in Latin America. He also viewed user fees as important means of supplementing financing from tax revenues, noting that in the private sector, even in lower-income countries, health programs sponsored by religious organizations recover a considerable part of their operating costs in this way. While warning that "multiple independent initiatives may complicate the evolution of a rational system unless they are developed within a general framework," Evans *et al.* nevertheless called for "mobilization of resources for health from the widest spectrum of alternative sources..., ensuring that these resources are a net addition to public funding rather than a substitute for it" (*ibid.*: 1123).

The World Bank subsequently developed an economic rationale for the distribution of health care financing responsibilities (de Ferranti 1985). Using the economist's distinction between public and private goods (the benefits of the former are generally shared, while those of the latter are enjoyed individually), the Bank advocated assigning responsibility for payment accordingly. Applying this principle to health care, preventive services should be publicly funded through the tax system, while curative services should be financed by their users, who could pay

for these services either directly or through participation in prepaid risk-sharing plans. In most LDC's, however, public health services are predominantly curative rather than preventive, and expenditures for hospital care far exceed funds allocated for primary care. Present policies thus need to be "substantially reoriented," and the "growing faith that health care should be totally paid for and administered by government needs to be vigorously challenged" (de Ferranti 1985).

In 1987, based on its earlier analyses and several years of health sector lending experience, the Bank issued its widely-circulated policy study, *Health Care Financing in Developing Countries: An Agenda for Reform* (World Bank 1987). Employing its classification of health services along a private goods/public goods spectrum, the Bank proposed four policy reforms:

- charging user fees at public health facilities, especially for curative care and drugs. Fees should be scaled to protect the poor, and the revenues thus collected should be used to improve and expand health services for the poor;
- facilitating the development of social and private health insurance, without which public hospital charges, in particular, cannot be increased;
- encouraging nongovernmental providers of health care to charge prices that consumers are prepared to pay, so as to allow public health services to concentrate increasingly on preventive care; and
- decentralizing government health services, particularly those for which user fees can be collected, and using local decision-making power and revenue collection as incentives for improving quality and efficiency at the point of service delivery.

The Bank's "agenda for reform" — in particular, its call for the imposition of user fees — is by no means universally embraced (see, e.g., Gilson 1988, who criticizes the Bank's policy on equity grounds). In 1987, this "agenda" was submitted to a critique, at the invitation of PAHO, by several Latin American public health authorities, and their comments, both in support of and critical of the Bank's policy, were subsequently published (see "Mesa Redonda" in Musgrove 1987b).

• Dr. Abraham Horwitz, Director Emeritus of PAHO, observed that the World Bank's position fails to take into account the consequences of this decade's economic recession and subsequent adjustment policies, and the effects of both on health care financing. He also warned that the study's conceptual distinc-

tion between curative and preventive care, suggesting private and public payment obligations respectively, should not be construed as a recommendation to separate these types of care, which health professionals consider to be mutually supportive activities. Horwitz went on to note that the public sector, before instituting (or increasing) user fees, must recognize that as much as a third of total health care spending in the region is already accounted for by direct household payments for health services.

- Dr. Julio Frenk, Director of Mexico's Institute of Public Health, questioned the Bank's public/private goods distinction as largely inapplicable to health services, inasmuch as most curative care has important social as well as private benefits. Implementation of the study's recommendations, in Frenk's opinion, would tend to lead countries toward a fragmentary health care model, while most countries in the region are working toward an integral organization of the health sector. He also questioned private alternatives — aside from the health sector's fragmentation, to which they may contribute — because he believes them to be inherently more costly than public health services, even among nonprofit providers.

- Dr. David Tejada de Rivero, Peru's former Minister of Health, pointed out that it is the "political demand" for government-funded curative care, on the part of both users and providers, that undermines attempts to reallocate public sector resources toward preventive care and inhibits the expansion of private sector alternatives. Public sector decision-makers, he

advised, should recognize that charging user fees — with exemptions for the indigent — would in effect reduce the implicit subsidy that free care represents for those who are able to pay for services. He noted that "no government will be able to achieve the goal of health for all" without increasing private sector participation in health services financing and delivery.

- Dr. Antonio Ordonez Plaja, former Minister of Health of Colombia, found the Bank's policy study lacking in guidance on the relative roles of the public and private sectors, and on the legal and administrative reforms necessary to implement its recommendations for reform. While accepting the study's contention of widespread public sector inefficiency as generally applicable within the region, he warned that health insurance schemes also have a poor record of cost containment. Ordonez also called attention to the effects of the region's economic crisis on the population's ability to pay for health services.

The reservations expressed by these commentators about the validity and acceptability of the World Bank's policy study on health care financing apply equally to AID's health financing guidelines. These reservations basically fall into two categories: those that fault donors' policies in this area for failing to consider the impact, on health financing, of the economic recession and subsequent adjustment policies; and those that question donors' preferences for private sector alternatives on equity, efficiency, or political grounds.

III

Research Methods

Some of the research on costs, demand, and health financing alternatives, reported in the 23 "focal" studies whose findings are summarized in Chapters IV-VI, below, used relatively sophisticated research methods: notable examples are the Dominican Republic household survey (Gomez 1988), the demand studies undertaken in Peru (Gertler *et al.* 1987) and the Dominican Republic (Bitran 1989), and the Belize and St. Lucia hospital cost studies (Raymond *et al.* 1987; Russell *et al.* 1988). Aside from these, however, most of the research reflected in the focal studies was simple in design. Researchers typically gathered their information from institutional records, interviews, and direct observations, and analyzed their data in taxonomic and descriptive terms; data limitations generally made it impossible to use more complex research methods. In this chapter, the research methods used in studies carried out under the HCF/LAC project are briefly explained.

A. Research Methods of HCF/LAC Studies

1. *Cost studies.* The HCF/LAC project carried out cost analyses in two different types of settings: national hospitals (in Belize and St. Lucia) and public and social security PHC facilities (in Ecuador). In each case, "cost" was defined as the fully-accounted-

for expenditures used to produce final health services.

In the Belize and St. Lucia hospital cost studies (Raymond *et al.* 1987; Russell *et al.* 1988), the research methods used were nearly identical. Each study involved the use of five steps to identify total costs and unit costs for all departments in the two national hospitals studied.

- For each hospital, the most recent line item expenditure report was assembled, primarily from hospital and MOH records.

- In discussions with hospital employees, "cost centers," representing all hospital departments and other discrete units, were identified. These cost centers were separated into those providing patient-related services, either directly or indirectly, and those providing non-patient-related services.

- The line items in the hospital expense report were assigned to these cost centers. The resulting figures were further adjusted to include costs incurred by the hospital but not reflected in its budget or expenditure report (e.g., prorated shares of MOH central administration), and to exclude costs incurred elsewhere but recorded in the hospital's expenditure report (e.g., time spent by hospital maintenance personnel at other facilities).

- The costs of indirect departments were allocated across the direct service departments using the

"step-down" procedure (1). Briefly, all the costs of the indirect department providing the highest volume of services to the widest range of other departments (e.g., Administration) were allocated to the remaining indirect departments, direct service departments, and other departments. The costs of the other indirect departments were then allocated similarly, until all such costs had been allocated to direct service and other departments. The allocation was performed using indices called "allocation statistics." For example, for depreciation and annuitization the allocation statistic was the square footage occupied by each department; for administration, direct expense per department; for hospital stores, supplies expense per department; for nursing administration, nursing staff per department.

- Finally, the total (direct plus indirect and overhead) costs per unit of service were calculated for the direct service departments. Total costs were divided by total service volume to arrive at the unit costs of providing services (e.g., bed days).

In Ecuador, the HCF/LAC project analyzed the costs of 18 primary health care establishments and the direct services they offered. The quality of services at the 18 facilities, and the equity of their distribution, were also studied (Gomez 1987).

The case studies included eight public health (MOH), seven rural social security (SSC), and three PVO facilities, located in two provinces — one in the mountains and one on the coast. Over 90 percent of Ecuadorians live in these two regions. Selection of cases for study was based on geographical and subsectorial comparability; the proportion of the target population at a low socioeconomic level; and data availability.

This study used a greatly simplified version of the step-down method (see above) to allocate system-wide overhead and indirect service costs to the level of primary health care centers. Overhead is defined here as the cost of national and provincial-level health system administration; indirect services include those that support the delivery of direct services, such as laboratory tests, maintenance, transportation, training, etc. Most of these services are provided for health centers by higher levels of care (typically provincial hospitals), but some are produced at a health

center as part of its staff's responsibilities. If support services were provided at the provincial level, they were included in the overhead cost estimate; if they were part of a center's staff responsibility, they were allocated to final services in accordance with the study's allocation of staff time to each final service.

- Overhead costs for MOH centers were estimated at the central and provincial levels, based on estimates of the respective proportions of overhead that should be allocated to each institution's levels of services delivery.

- The same approach was used to calculate SSC overhead cost allocations to health centers. The overhead percentages were larger, however, because the SSC delivers primarily basic health services, with only limited provisions for hospital care, whereas the MOH carries a major hospital cost burden.

- The recurrent costs of resource inputs directly identifiable with each center were extracted from provincial and health center records.

- The costs of most health center buildings and equipment were calculated based on their replacement cost at current market values, and then amortized with reference to the useful life-spans of these facilities. In some cases, rental cost was used.

- Each center's total resource input costs were then allocated to each category of final services, proportional to the distribution of staff time devoted to each category, except that certain costs (such as food supplements and vaccinations) were allocated wholly to those respective services.

- The unit costs of final services were calculated by dividing the number of services delivered over one year by the expenditures identified with that category of services for the same year.

The study also attempted to assess the quality of health services, the equity of their distribution, and the relationship of quality and equity to costs. Quality was assessed by

- identifying existing standards for care and evaluating health facility employees' knowledge of these standards;

- evaluating the degree to which the standards were being applied at each establishment; and

- reviewing the supervision process at different levels.

Equity was measured simply, and only at the regional and provincial (as opposed to the individual facility) levels, by examining data on the distribution

(1) This procedure is illustrated in detail in Raymond *et al.* 1987, Table A.12, and Russell *et al.* 1988, Tables B.4 and B.5.

of real and financial resources across the population. The relationships between the distribution of these resources and population distribution provided the basis for equity analysis. The variables were:

- human resources (*e.g.*, physicians, nurses);
- outpatient health care facilities (*e.g.*, health centers, health posts);
- complementary physical resources (*e.g.*, x-ray equipment, laboratories); and
- corresponding financial resources.

2. **Demand studies.** The data needed for health care demand analyses are usually collected in household surveys. The HCF/LAC project's analysis of the demand for health care in Santo Domingo, **Dominican Republic** (Bitran 1989), was based on data collected in such a survey, undertaken under HCF/LAC auspices (Gomez 1988).

A probabilistic household sample survey was selected as the best mechanism for obtaining information on the behavior of the population of Santo Domingo vis-a-vis available health services, and on the determinants of this behavior. A fundamental premise of the effort was that an analysis of health services utilization must systematically consider the relative importance of various factors that can affect demand by households. Some of these factors pertain to individuals; some are attributes of the surrounding environment; and some reflect the supply of services available. The survey thus took into account

- demographic factors (*e.g.*, age, sex, labor force participation);
- biological factors (*e.g.*, pregnancy and the perceived presence of illness);
- sociocultural factors (*e.g.*, educational attainment and respondents' knowledge of available services);
- economic factors (*e.g.*, household income and assets); and
- institutional factors (*e.g.*, the distance of health services and perceptions of the accessibility and quality of different types of health care providers) (2).

The design of the survey instrument was based on other surveys, particularly the Peruvian household survey of health and nutrition (Gertler *et al.* 1987), and on the recommendations of the study's Advisory Committee, made up of representatives of the health

subsectors in Santo Domingo and USAID officials. This process also guided preparation of a fieldwork manual for the conduct of interviews, which set standards for interview quality and efficiency and discussed concepts and definitions pertaining to the interview procedure. Data for all members of selected households were included on the questionnaire (although not all questions were asked of all persons). The questions were to be answered by every adult in each household, or by the head of the household or his/her spouse, or by an adult familiar with all members of the household.

The survey population was divided into three socioeconomic residential strata (low, middle, and high), based on household characteristics such as the proportion of a household's income spent for food, the presence or absence of running water in the home, and appliance and automobile ownership. The probabilities that any given household within a stratum would be selected were equal, but differed from stratum to stratum since the sizes of the strata varied, and since — for sampling efficiency — samples of similar size were required from each stratum.

Within each stratum, "clusters" of dwellings containing households to be interviewed were defined, based on "supervision areas" identified for the 1981 national census. Cluster size varied from 30-100 dwellings. Clusters were further divided into "segments" (subdivisions of supervision areas) with an average size of about 14 households each. An average of six households was selected from each of 500 segments to provide the survey sample. The survey was thus planned to cover a total of 3,000 households, concentrated in 250 supervision areas.

Ultimately, 2,537 of the 3,000 households selected were surveyed: 571 from the high stratum, 967 from the middle, and 999 from the low. These households, containing 11,565 persons, represented 84.5 percent of the selected sample — an acceptable level of data collection efficiency. Excellent results were obtained in the low and middle strata (90.5 and 91.1 percent coverage), but results in the high stratum (67.2 percent coverage) were only fair, due to interviewers' difficulties in obtaining access to respondents living in higher socioeconomic conditions. Restored absolute figures for the study universe were obtained by weighting the sample results by the reciprocal of the probability of selection, adjusted for non-responses.

The Dominican research organization IEPD (Institute of Development and Population Studies) was responsible for data collection and for the initial

(2) The specific variables that were ultimately selected for the demand model are listed below.

phases of data processing. Five field teams, each one consisting of a supervisor and five interviewers, collected the data. The schedule of work called for interviewers to survey an average of one segment (see above), or an average of six households, per day per interviewer. The final result, 2,537 completed interviews, represented an average of 5.1 interviews per day per interviewer, which is quite acceptable compared to the efficiency typically achieved in urban surveys in the Dominican Republic and other countries in the region.

Computer operators recorded the collected information on diskettes, using the ISSA computer program, which allowed the data to be checked automatically for inconsistencies. When these were encountered, continuing the program required that the operator enter corrected information. The database created with ISSA was then converted into files designed for the SPSS computer program for the production of cross-tabulations.

Quality control of the data included daily reviews of all questionnaires; daily reviews of each interviewer's work; data revisions based on random re-interviews of 10 percent of all households; and the compulsory checking and correcting of the data mandated by the ISSA program. The re-interviews, involving 250 households, had two purposes. The first was to encourage the interviewers, who knew there would be re-interviews but not which households would be selected, to work accurately and honestly. The second was to generate a statistical indicator of quality: the rate at which differences between the interview and the re-interview occurred for each question checked. The results of the comparison of interviews with re-interviews was quite satisfactory (see Gomez 1987:33).

Meanwhile, IEPD conducted a supply-side inventory of the health resources available to the survey population. Its objectives were to identify all outpatient and inpatient health facilities in Santo Domingo as well as all noninstitutional pharmacies and drug stores, and to collect information on these facilities. This permitted an assessment of survey respondents' knowledge of the health resources available to them, as well as an understanding of the amount of influence that the objective characteristics of different health care facilities had on the health care seeking behavior of the population.

In addition to these databases, demand analysis also requires an economic model of health care seeking behavior that captures the process by which consumers evaluate their options and choose among them

(see Akin *et al.* 1985 for a review of economic models of the demand for care; see also Bitran 1988:15 ff.). Applying such a model to the databases, the HCF/LAC study team produced a series of demand equations to estimate the amount of health care consumed, subject to demographic, biological, sociocultural, economic, and institutional factors (for technical detail, see Bitran 1988: Appendix B).

For outpatient care, eight explanatory variables (sex, age, social security coverage, household income, education, price of medical care, travel time to health facilities, and type of health problem) were tested for their effect on each of two dependent variables (whether or not to seek medical care in case of illness, and which health subsector to use). This was repeated for inpatient care, except that the decision to seek/not seek inpatient care was omitted (since inpatients have relatively little choice about whether or not to seek care), as were the effects of price on inpatients' choice of subsector (due to database limitations). This procedure provided estimates of the current demand for health care, and also assessments of the likely impact on demand if one or more of the explanatory variables — for instance, the price of services — were to change.

3. Alternative financing studies. Studies of ways to finance health services other than through general tax revenues are typically based on institutional data sources. Researchers gather data on management systems, financing mechanisms, and means of payment and disbursement, then attempt to determine the interdependency and interaction of institutional subsystems in terms of achieving intended objectives. They also analyze existing or proposed financing and delivery mechanisms with reference to comparative typologies of such mechanisms, developed on the basis of experiences in other parts of the same country, or — more typically — in other countries.

In Peru, HCF/LAC researchers studied the kinds of private sector health care financing mechanisms currently existing in the Lima/Callao metropolitan area, where health insurance sales have grown in recent years and other prepayment mechanisms have emerged (Solari *et al.* 1987). The study team originally expected health care providers, insurers, and employers to provide them with cost and utilization data. However, such information was not forthcoming from these sources — mainly because the agencies involved did not systematically collect it, but also because they were reluctant to share their data

due to the competitive nature of the market. The study team therefore modified its methods to emphasize institutional and other qualitative data collected in interviews with representatives of different areas of the private health sector.

Ultimately, a typology of health services financing and delivery arrangements in Lima/Callao was established, the evolution of these arrangements was traced, their current four basic configurations were identified, and the potential size of the private risk-sharing market in Lima/Callao was estimated, using both institutional and household survey databases.

In **Bolivia**, the HCF/LAC study team estimated whether health care facilities run by PROSALUD, a private-sector PHC delivery system, would generate sufficient revenues to be "self-financing" (Rosenthal *et al.* 1988). Self-financing was defined in two ways: individual PROSALUD facilities might eventually cover all their own costs, or they might cover these costs plus their share of their parent organization's costs. Major steps in the study included:

- examining the potential utilization of health care facilities in the markets served by two existing PROSALUD facilities, using data on community attributes from a recent household survey;

- establishing the total costs of these two facilities (calculated two ways — including and excluding central office costs). The output measure used was an "episode of illness treated" — a package of diagnostic and curative services, including an initial and any follow-up visit(s) to a physician, provided in response to a single health problem. All health services were assumed to be associated with episodes of illness, and were distributed accordingly within each health center (3);

- determining the capacity of each facility by estimating total physician time available for patient care and dividing it by the average time spent per physician per episode of illness, which yielded the maximum number of episodes that could be treated per facility with existing staff and patterns of time distribution;

- estimating the facilities' potential for self-financing. Ranges of potential revenues were developed for two different financing mechanisms, fee-for-service (FFS) and a prepayment plan. This

provided the basis for assessing whether each facility would reach a break-even point, represented by the relative numbers of FFS and prepaid patients it would have to treat (at current or adjusted fees) so that its total revenues would equal or exceed its total costs. To calculate these points, the study team took into consideration the degree to which FFS users actually paid their charges, and the number of prepaid episodes treated at a facility (the latter generating less income); and

- finally, relating the break-even points to the predicted utilization levels developed earlier, to ascertain the practical feasibility (as opposed to the hypothetical possibility) of reaching the break-even point.

In **Guatemala**, an HCF/LAC study team assessed the feasibility of extending primary health services via the private sector to currently underserved agro-export workers and their families in the South Coast region of the country (Gwynne 1988). Using a case study approach, the study team analyzed the organization, coverage, and (where possible) costs of currently-existing South Coast private sector health care arrangements — both organizationally-based, multiple-site arrangements and individual or single-site practices or programs. The entities analyzed were those that, based on selected criteria, had the greatest potential for extending primary health services in the region. The implementation and potential sustainability of extended health services were also considered. The analysis involved three major steps.

- To gauge the capacity of existing arrangements for extending health care to agro-export workers and their families, a typology and corresponding inventory of private South Coast health care resources was developed. The four most common types were the *ad hoc* provision of PHC by local private physicians; health services provided by individual plantations for their own workers; other arrangements consisting (like the individual provider arrangements) of single health care provision sites (*e.g.*, clinics sponsored by Catholic parishes); and arrangements characterized by multiple sites (*e.g.*, facilities run by the National Coffee Growers' Association).

- Health care arrangements were selected as case studies based on the likelihood of each becoming an effective vehicle for extending primary health care to the target population. The criteria used in ranking organizationally-based, multi-site health services providers included: (1) willingness to continue to serve the target population; (2) willingness to expand

(3) Note that this output measure differs from the one used for cost analysis in the HCF/LAC Ecuador cost study, which was "final services."

services to the target population; (3) managerial capability; (4) acceptability to farm owners ("acceptability" was defined as comprising two considerations, management control and cost); and (5) long-term economic sustainability. Each of these criteria received equal weight.

- The study team felt it was inappropriate to apply two of these criteria — "willingness to expand" and "managerial capacity" — to individual providers or organizationally-based single-site efforts. A second set of criteria was thus developed for these two categories of providers. It consisted of three of the same criteria applied to organizations (numbers 1, 4, and 5), plus a new one: the probability that a given individual provider or single-site effort would be able to develop an "umbrella" organization capable of administering the health care delivery efforts of several such arrangements. This criterion was considered so important that it was assigned a weight equal to that of the other criteria combined.

B. Further Observations on HCF/LAC Methods

Three features characterize the methods used in all eight HCF/LAC country studies:

- various analytical methods quite commonly used in the health sector in more advanced countries were adapted, in some cases for the first time, to lower-middle-income country settings;

- an important "rule of thumb" of the project was that before any recommendations for change within a country's health sector could be made, in-depth research into what actually existed was needed. In Peru, for example, where the project was asked to research the potential for the future development of private, prepaid health plans in the Lima/Callao area, the study team discovered, in the early phases of its research, that HMO-like institutions already existed;

- in each research study, HCF/LAC project staff and consultants worked closely with host country health sector officials and researchers, from design through preliminary analysis of results to a thorough peer review of the preliminary draft report. Two measures were particularly helpful in this regard: (a) the creation, in several host countries, of "steering committees" and "working groups" composed largely of host country representatives, who actively participated in the field research; and (b) the strong repre-

sentation and active participation of host country counterparts at the HCF/LAC project's annual workshops, where they subjected the preliminary draft documents to the equivalent of the peer review process that more "academic" studies typically undergo prior to publication.

Other methodological features of the HCF/LAC project are more specifically applicable to cost, demand, or alternative financing studies.

1. *Cost studies.* The HCF/LAC project's three cost studies all relied, to a great extent, on the application of standard cost accounting methods, including a modified version of the step-down allocation procedure. Cost accounting (including the step-down procedure) is commonly used in the US, but it is less common in LAC countries, and more often associated with private than public hospital or PHC costs. One probable reason for this is that the application of cost accounting methods to health facilities in the US was stimulated by the institution of third party insurance mechanisms, which, until recently, typically reimbursed costs based on patient days, but such payment mechanisms exist only infrequently in LDCs.

The Belize and St. Lucia hospital cost studies provide another example of the HCF/LAC project's application of methods not commonly used in the LAC region. In neither Belize nor St. Lucia were hospital costs tracked by type of medical or surgical problem — that is, by diagnostic category. In each country, the study team attempted to estimate costs per diagnostic category by applying the recently-developed DRG (Diagnostic Related Groups) method of cost analysis. The St. Lucia study team also used the Appropriateness Evaluation Protocol (AEP), a method of assessing the appropriateness of hospital use. This protocol, when applied to a sample of patients discharged from the high-volume obstetrical service at Victoria Hospital, revealed a relatively high level of inappropriate admissions.

Another feature of the HCF/LAC cost studies was that, when necessary, its study teams developed new cost analysis data. In both Belize and St. Lucia, certain basic cost accounting data were unavailable, so the study teams found ways to develop them. The step-down method, for example, requires the use of "allocation statistics" (see above). One such statistic, used to allocate indirect departments' expenses for depreciation and annuitization, is the number of square feet physically occupied by each direct service

department in a hospital. In St. Lucia, in the absence of the needed data, the study team hired a local carpenter to provide measurements of the entire hospital.

An innovative feature of the HCF/LAC Ecuador cost study was that the study team, in addition to analyzing costs, also attempted to assess the quality of Ecuadorian health services, the equity of their distribution, and the relationship of quality and equity to costs. Equity, in particular, has not often been analyzed successfully in the context of cost studies, but — as a matter of social justice — the equity of health programs is as relevant as their efficiency and effectiveness. Methodological precedents for the study of service quality and equity are limited, so guidelines for studying these two components were established as the work progressed. The ways in which quality and equity were assessed by the Ecuador study team are described above. It should be noted here that these assessments were highly simplified and subjective.

2. Demand studies. The demand analyses undertaken by other projects in Bolivia, Honduras, and Jamaica were purely descriptive; relationships between sets of variables were suggested, but the actual statistical significance of relations among variables was not analyzed. In the HCF/LAC Dominican Republic demand analysis (as in the earlier HSA-Peru project), in contrast, survey data were submitted to econometric analysis, thus permitting tests of statistical significance. These analyses included estimates of price elasticity — the sensitivity of peoples' demand for health services to price changes. Earlier, Akin (1985) had innovatively employed household survey data to an examination of the demand for health care in the Philippines, but — surprisingly — found no price effects. In both Peru and the Dominican Republic, more consistent datasets were generated specifically for demand analysis, and both

studies were designed to allow econometric analysis to determine the price elasticity of demand.

Another notable feature of the HCF/LAC demand study was that data were fed directly from survey questionnaire forms into a computerized database on a daily basis, and checked for accuracy and consistency in the process — an innovation introduced in 1986 by Westinghouse International Health Systems, in its population and health surveys. This allowed the HCF/LAC work in the Dominican Republic to be accomplished, from inception through data collection to preliminary results, in three months, and to final report presentation in a relatively short 14 months. In the ENNSA (Peru) survey, by comparison, two years elapsed between the completion of data collection and their analysis.

3. Alternative financing studies. The three HCF/LAC alternative financing studies, undertaken in Peru, Bolivia, and Guatemala, analyzed their data in standard taxonomic and descriptive terms, but nevertheless contained some unusual methodological features. For instance, the study of alternative health care financing mechanisms in urban Peru — one of the first in-depth studies of private sector financing alternatives undertaken in a LAC metropolitan area (see also GHAA 1985) — was the first to create a typology of private financing alternatives based on what entities bear the financial risk. In the Guatemala study, a scoring system (see above) was developed for ranking existing health services delivery arrangements in order to judge their potential for expanding health services to the study's target population, while in Bolivia, break-even analysis, not often used in health sector studies in LDCs, was used to assess the potential of PROSALUD facilities for eventual self-financing.

IV

Costs of Health Care

The LAC region's economic crisis, and the constraints it has imposed on public health financing, have caused LAC health authorities and international donors alike to promote "cost containment" in the delivery of health services. In the absence of cost accounting systems, and given the limited information available on the quantity of services delivered, however, "cost containment" must be assumed to refer to efforts to contain *expenditures*. Improving "cost-effectiveness" has also been a policy priority; AID's health assistance policy paper and health care financing guidelines (AID 1986a, 1986b) include the specific goal of encouraging the development, in LDCs, of cost-effective interventions and programs. Despite these concerns with costs, however, few cost studies have been carried out in the LAC region (see Robertson 1985 for summaries of pre-1985 cost studies in LDCs, including several in the LAC region).

This chapter presents findings from the five recent health care cost studies undertaken in the LAC region. Three were carried out by the HCF/LAC project in response to country requests via USAIDs: a cost study of PHC establishments in Ecuador (Gomez 1987), and cost studies of the major national hospitals in Belize (Raymond *et al.* 1987) and St. Lucia (Russell *et al.* 1988). The other two recent cost studies in the region focused on the management of health services in Belize, Grenada, St. Kitts-Nevis and St. Lucia (Hamilton and Hinchcliffe 1988) and on the

cost-effectiveness of routine vs. mass campaign vaccination strategies in Ecuador (Shepard *et al.* 1989). The vaccination study, carried out by REACH, was complementary in design with the HCF/LAC cost study of Ecuadorian PHC facilities, and the two studies were undertaken simultaneously. This permitted some comparative cost analysis of alternative strategies.

In Ecuador, the HCF/LAC project analyzed comparative costs of PHC facilities operated by the MOH and rural social security program (SSC). In Belize, MOH officials needed a basis for revising the country's outdated public health user fee schedule, while the St. Lucian MOH, concerned that the national hospital was absorbing an unsustainably high proportion of the country's public health expenditures, wanted first to identify the full financial costs of the hospital and then to determine how they could better be controlled.

A. Ecuador

In Ecuador, an HCF/LAC study team calculated the total annual costs of each of 18 PHC facilities selected from the public, SSC, and private subsectors, as well as the average unit costs of the final services delivered at these facilities. Major findings of the study included the following:

- the total annual costs of the Ecuadorian PHC facilities varied greatly, but in general costs were slightly lower for SS facilities than for MOH facilities. The higher annual total costs of MOH facilities were probably due primarily to their greater variety of final services, including, *e.g.*, vaccinations, health promotion, and dental services;

- however, the MOH facilities' costs per comparable unit of service (a more meaningful measure for comparative purposes) were lower than those of SSC facilities offering fewer services. There was some indication that SSC facilities provided qualitatively better curative care, but these facilities did not offer the wider range of services (especially preventive services) that the MOH facilities provided;

- personnel costs represented more than 50 percent of total costs at most of the Ecuadorian facilities, as is to be expected with a labor-intensive service such as primary health care. This was true of both MOH and SSC facilities; however, MOH facilities employed larger numbers of personnel at relatively lower salaries (50 percent lower than SSC salaries), while SSC facilities employed fewer but more experienced, and thus more costly, doctors and dentists;

- building costs represented the second largest cost item at MOH facilities (on the average, 20.5 percent of total costs), while at SSC facilities, supplies (mainly pharmaceuticals) were the second largest input, reflecting the fact that SSC facilities are generally better supplied with medicines than MOH facilities;

- curative services, provided mainly by physicians or dentists, tended to have higher average costs than preventive services, which had higher inputs from (less costly) auxiliary nurses. Although the MOH facilities offered more (and more diversified) preventive services than the SSC facilities, there was a greater emphasis on curative than preventive services in both subsectors;

- consistent with the finding that a greater variety of services tended to be associated with lower unit costs, the costs of vaccinations were lower at MOH facilities offering a wider range of services.

Concurrently with the HCF/LAC study, Shepard *et al.* (1989), using a 1986 national household survey of vaccination coverage and a study of selected field sites as additional databases, compared the costs of routine vaccinations at PHC facilities of the Ecuadorian MOH (such as those studied by the HCF/LAC

project) with the costs of vaccinations administered during a mass immunization campaign conducted as part of the PREMI program (a USAID-supported child survival program of the Ecuadorian MOH). The study found that

- the mass vaccination campaign had higher unit costs than routine services. The average cost of vaccinations, per dose, was US \$0.83 for campaign vaccinations and US \$0.29 at PHC facilities. The costs per fully vaccinated child were US \$8.60 and US \$4.39 for campaign and routine services, respectively, while costs per child death averted (based on disease-specific mortality rates recorded in Ecuador) were estimated at about US \$4,200 and US \$1,900, respectively;

- the mass campaign appreciably improved vaccination coverage of younger children who had not been served by PHC facilities, and overall raised the proportion of children under five who were fully vaccinated from 43 to 64 percent. In that sense, the mass campaign was perhaps equally as cost-effective as routine vaccinations — possibly more so.

B. Belize and St. Lucia

HCF/LAC study teams in Belize and St. Lucia calculated the fully-accounted-for costs of each country's national hospital: Belize City Hospital in Belize and Victoria Hospital in St. Lucia. Each of these government-run facilities was absorbing a large percentage of its nation's health care expenditures, while smaller district hospitals were underutilized. In addition to providing data necessary for better cost control at the two hospitals, the project supplied both Belize and St. Lucia with analyses of expenditures.

The health systems in both countries consist of a mix of public and private services, but Belize has proportionately larger private expenditures for health: 44 percent of its health expenditures are for private care, vs. about 20 percent in St. Lucia. Apart from this difference, the two countries — both with populations well under 200,000 — are quite comparable in terms of health services organization and delivery. Both governments operate most of their countries' health facilities (both primary and secondary), and both exempt a large proportion of the population from direct payment for their care (at the time of the St. Lucia study in 1987, 92.7 percent of St. Lucians were exempt from payment, but this figure had

dropped to 80 percent by 1989; the comparable figures for Belize are unknown). Both countries, in addition to their national hospitals, have government-run district hospitals (Belize has six to St. Lucia's two) and a network of health centers (28 in Belize and 33 in St. Lucia).

- According to official estimates, nearly 63 percent of all expenditures for health of the Belizean MOH (1985), and nearly 40 percent of the equivalent budget in St. Lucia (1986/87), were spent on the national hospital.

- Once the full costs of the two countries' national hospitals had been calculated, it became clear that budget figures understated the actual expenditures for health. The official estimate of the annual expenditure for Belize City Hospital was only 46 percent of its full cost; the comparable figure for Victoria Hospital was about 60 percent. There were two main reasons for this difference between reported expenditures and actual costs: first, substantial expenditures of these hospitals were channelled through other institutional accounts, such as "central stores" (the centralized pharmaceutical procurement agency of the MOH); and second, amortization of buildings and equipment and annuitization of the capital costs of land were not included in the official budget figures.

The 186-bed Belize City Hospital and St. Lucia's 211-bed Victoria Hospital are both secondary-level facilities, offering basic inpatient services but few specialty services; cases requiring sophisticated treatment are sent abroad. Each hospital has, in addition to its inpatient wards, a number of outpatient clinics providing such services as dentistry, ophthalmology, and psychiatry, and an emergency department that serves the surrounding area as an ambulatory clinic. More detailed findings on hospital costs in Belize and St. Lucia are:

- the Belizean MOH had an annual budget of the equivalent of US \$5.36 million (1986/87), of which health services represented 96 percent. In St. Lucia, total MOH expenditures in 1986/87 were US \$7.52 million, of which about 83 percent were for health. (Both ministries also provide non-health-related services.) The amounts the two countries spent on health were similar — about US \$5.1 million for Belize and US \$6.2 million for St. Lucia;

- *per capita* public health expenditures were somewhat lower in Belize than St. Lucia — US \$30

vs. US \$45 — because Belize relied to a larger extent on privately financed health services than St. Lucia:

- public health expenditures as a percentage of Central Government expenditures were 10 percent in Belize and 12 percent in St. Lucia, again reflecting Belize's greater reliance on private health financing;

- as a result of liberal exemption policies, cost recovery from user fees for public health services was very low in both countries. In Belize, user fees were approximately one percent of the MOH operating budget; the corresponding figure for St. Lucia was less than half of one percent. In both countries, the amounts of user fees collected were less than what published fee schedules allowed;

- examples of average unit costs (based on full cost accounting) at Belize City and Victoria Hospitals, which had similar utilization characteristics, included: cost per patient day at Belize City Hospital, US \$74; at Victoria Hospital, US \$50; (b) average cost per patient stay at Belize City Hospital, US \$448; at Victoria Hospital, US \$350;

- the St. Lucia team studied the levels of the health system at which costs were controlled. Victoria Hospital had control over only about 20 percent of its costs, while the country's Public Service Union and a Cabinet-appointed negotiating team controlled the 69 percent of total costs attributable to personnel. Control of the 23 percent of total costs represented by supplies and pharmaceuticals was shared by the hospital and Central Medical Stores, a separate entity within the MOH;

- the medical care components of the two countries' social security programs differed: the Belizean program covered only treatment of worker injuries, while the St. Lucian program covered a far greater range of medical services. In Belize, the Social Security Board paid the MOH the equivalent of US \$25,000 annually for hospital treatment of worker injuries, while in St. Lucia, the National Insurance Scheme (NIS) annually contributed US \$560,000 to the country's MOH to cover health services for active NIS contributors. In neither country was it clear whether the social security program's subvention to the MOH adequately covered the health care costs for which it was intended.

In 1988, the effectiveness of health services management in Belize and St. Lucia was assessed in a study prepared for CARICOM, the Caribbean common market organization (Hamilton and Hinchcliffe

1988) (Grenada and St. Kitts-Nevis were also included in this analysis). The study updated the HCF/LAC Belize and St. Lucia studies with the following information:

- in both countries, the health sector's share of national recurrent expenditures had gone up slightly, by 1988, to 11.4 percent in Belize and 12.1 percent in St. Lucia (as compared to 10 percent for Belize and

12 percent for St. Lucia at the time of the HCF/LAC studies);

- by 1988, cost recovery rates in the public health sector had risen to an estimated 1.3 percent for Belize and 9.5 percent for St. Lucia (*ibid.*: III:18), although the Hamilton and Hinchcliffe report does not state whether these figures are based on insurance plus fees or fees alone.

V

Demand for Health Care

Studies of the demand for health services may be based on actual health services utilization as reported by households, or on estimates of potential utilization based either on household interviews or assumptions made by researchers or health services planners. While hypothetical behavior may differ from actual, both kinds of data can be useful in health planning. Demand studies are informative because the demand for care does not necessarily coincide with users' medical needs as determined by health authorities. If the supply of services were determined only on the basis of a population's professionally-diagnosed health needs, there could be a mismatch between the supply of and the demand for services. Health systems, if they are to be both equitable and efficient, should meet both the need and demand of users (Musgrove 1985), subject to resources limitations and therefore to the need to regulate supply and/or demand.

A recent report (Bitran 1988) summarizes principles of health care demand analysis, and also reviews more than a dozen recent demand studies from around the world, all undertaken in the last decade. Here, we update this compendium with findings from recently-completed demand studies in Peru and the Dominican Republic, as well as with related findings from Bolivia, Honduras, and Jamaica.

A. Peru

An analysis of the demand for health care in urban Peru (Gertler *et al.* 1987), based on data gathered in the 1984 National Nutrition and Health Survey (ENNSA), was intended to offer policy alternatives for influencing the demand for health care. Rather than attempting to explore a virtually limitless number of policy alternatives, the authors of the study devised an interactive planning tool, using computer programs and databases, with which policy-makers could examine the consequences of implementing various specific policy options. Findings of the study included the following:

- increasing user fees charged in public health facilities in Lima and several mountain cities in Peru would not greatly deter residents — other than the very poorest — from seeking health care (although it would affect two other choices: subsector and type of facility). Increasing user fees at public hospitals, for those able to pay (while exempting low- and lower-middle-income households), would result in nearly proportional increases in public sector revenues;
- increasing the user fees charged for ambulatory care at public hospitals in Lima, while maintaining the present fee schedule at the city's public health centers and health posts, would result in almost no

change in the total number of outpatient visits to health care providers, but it would considerably increase visits to public health centers and posts as well as to private clinics, thereby reducing hospital use;

- whether Peruvians seek health care when they are ill, and where they seek it, are greatly affected by the accessibility of care. In some urban areas where public facilities are easy to reach, improving access (by constructing new facilities or improving transportation to existing ones) would not make much difference in the demand for health care. But where public health facilities — even though still within city limits — lie at some distance from users' residences, improved access would substantially increase the demand for care;

- users of urban health services in Peru believed that the quality of ambulatory care was highest in private clinics, followed by public hospitals. Public health centers and posts were perceived to provide care of low quality; indeed, if all public and private health services were free and accessible to all, fewer than 10 percent of all visits would be to public PHC facilities. The elderly, in particular, had such a low opinion of the quality of services provided at public health centers and posts that — provided some alternative, such as private care, were also accessible — they would virtually never seek health care at public facilities, even if it were free and readily accessible.

B. Dominican Republic

In the Dominican Republic, the HCF/LAC project analyzed household demand for medical care in the capital, Santo Domingo (Bitran 1989), based on data collected in a 1987 household survey also conducted by the project (Gomez 1987). (For purposes of this demand analysis, "medical care" was defined as curative, non-dental, physician-provided care.) The survey included questions on socioeconomic variables; respondents' self-perceived health problems; their utilization of health services provided by the country's ministry of health (SESPAS), social security institute (IDSS), armed forces, and private providers; their coverage by health insurance programs; and their out-of-pocket expenses for health services and medications. Among the findings resulting from the household survey and demand analysis were:

- nearly 42 percent of the population of Santo Domingo reported having some symptom of illness during the two-week survey recall period. Two-thirds

of these people did not seek medical care, primarily because they believed it unnecessary, but — based on survey responses — at least 10 percent and up to 20 percent of this subtotal appear to have been constrained from seeking care by its cost or inaccessibility;

- about 70 percent of all outpatient consultations in Santo Domingo were for medical care; the remaining 30 percent were for preventive, dental, and maternity services, treatment of accidental injuries, and other causes;

- most health services in Santo Domingo (including curative and other kinds of care) were provided by medical doctors (84 percent) or dentists (11 percent). Only five percent of consultations were with paramedical providers;

- approximately 56 percent of outpatient visits to doctors took place at private facilities, 30 percent at SESPAS facilities, 10 percent at IDSS facilities, and four percent at Armed Forces facilities. The preference for private care was strong even among the low-income population. The distribution of hospitalizations by subsector was similar to that of visits for ambulatory care;

- less than one-fourth of the population of Santo Domingo had medical care coverage through IDSS, private insurance or prepayment plans, or the Armed Forces (there was some double-coverage and cross-utilization of these services among those covered). More than 75 percent of the population had no coverage through membership in a health care organization (other than SESPAS, which has a mandate to provide free care for all);

- of outpatients and inpatients who used private health services, two-thirds and three-quarters, respectively, did not have private insurance coverage; of those without coverage who used private services, 90 percent paid for their care directly and 10 percent received private care free of charge; and

- almost a third of outpatient visits to IDSS facilities were by patients who were not eligible for IDSS coverage, yet 86 percent of these non-beneficiaries were attended free of charge. At Armed Forces facilities, almost half of all visits were by non-beneficiaries, but all who visited these facilities were attended free of charge.

Isolating the effects on demand of individual variables, the study found that:

- age had an effect on demand, across all income groups. Of those who felt ill, infants under the age of one year were the most likely to obtain medical care,

followed by children in the 1-4 age group. There was much lower health services utilization among ill school-age children (ages 5-14), compared with both younger and older age groups;

- utilization of outpatient health services by females (62 percent of all consultations) outweighed females' representation in the population (53 percent). Only five percent of females' relatively heavy utilization of outpatient health services was associated with pregnancy;

- education had only a slight effect on demand, with the better-educated somewhat more likely to seek care than the less well-educated, and somewhat more likely to choose a private doctor once the decision to seek care had been made;

- household income had only a small effect on demand: for both outpatient and inpatient care, ill individuals with higher household incomes were only slightly more likely to seek care than those with lower incomes; but

- household income did affect the choice of which subsector to visit: people with higher incomes were more likely to visit private physicians (who charged higher prices), and those with lower incomes were more likely to visit either SESPAS or IDSS physicians (for whose services, with rare exceptions, they paid nothing). It must be noted, however, that — in virtually every household income category — a majority of individuals consulted private doctors;

- price had only a minor effect on the likelihood of seeking medical care, although people with lower incomes were more sensitive to price than higher-income individuals. Price simulations revealed that the health care seeking behavior of people in all income groups was not very sensitive to either private or SESPAS price changes. At SESPAS facilities, for example, where only about 10 percent of those attended paid user fees, exempting fewer patients from payment, and charging somewhat higher fees to all those not exempt from payment, would reduce utilization less than proportionately, even among low-income groups; and

- health services in Santo Domingo appeared to be located within reasonable distance of most users; travel time differences among the subsectors had little effect on demand. Waiting time differences, however, were considerable: in the private subsector, the average wait was 49 minutes — 25 minutes less than the SESPAS average. Average waiting times were similar in SESPAS, IDSS, and Armed Forces facilities, ranging from an hour to an hour and 14 minutes.

C. Bolivia

In 1984, USAID/Bolivia sponsored a feasibility study of the potential of privately-financed PHC services, targeting low-income groups in rural and marginal urban areas of the department of Santa Cruz, to become self-sustaining. Subsequently, the PRICOR project, together with the Bolivian organization FIDES, was asked to design such services and test alternate ways of financing them (PRICOR 1987:107). In connection with this effort, FIDES undertook a household survey of target population groups in three communities in Santa Cruz, in which respondents were queried about their potential demand for health services (see O'Connor *et al.* 1985). A total of 1274 households was surveyed. Results included the following:

- over half of survey respondents felt that, ideally, the government — rather than communities and/or families — should deliver health services. However, a majority of respondents felt that — again, ideally — the family or community should pay for health services (*ibid.*: 1985:63), although respondents in the different areas preferred a variety of different financing mechanisms. These included annual dues and installment payments (presumably paid directly to a health facility's parent organization, although this is not specified in the report), payments in kind, payments in labor, cash fee-for-service payments, and raffles;

- the study recommended a combination of financing strategies to foster cost-sharing while controlling potential overutilization. These might include fees-for-service (in accordance with ability to pay) and drug sales.

Subsequent to this survey, and after several PHC facilities had become operational under the name PROSALUD, the HCF/LAC project designed a market analysis model for estimating whether future PHC facilities in Santa Cruz would generate sufficient revenues to cover their total costs — and possibly help support their parent organization as well (Rosenthal *et al.* 1988). To assess whether a particular PROSALUD facility would — on the basis of prepayment arrangements and/or fees-for-service — become self-financing or not required an understanding of the potential demand for health care in its area. The study reported that:

- to become wholly self-financing, the PROSALUD system needed to expand, in order to spread central office costs over a larger number of facilities;

- successful expansion would depend on identifying communities that would be able to generate enough demand to support PROSALUD facilities, which in turn would depend on the ability of the demand model to select appropriate locations;

- after a one-year trial, use of the model and financial planning method as management tools had resulted in improved financial performance at PROSALUD facilities. With increased utilization and better financial planning, the average cost recovery rate for all facilities (excluding prorated central office costs) had increased from 40 to 80 percent. For urban facilities over the same time span, the rate of cost recovery had increased from 50 percent to 89 percent: as of June, 1989, it was nearing 100 percent (again, excluding central office costs). For rural facilities, because of insufficient utilization, the overall cost recovery rate was lower; nonetheless, it had increased from 33 percent to 61 percent;

- there were wide differences in the potential for self-financing within the PROSALUD system, depending on direct fees for services vs. prepaid sources of revenue. Because the prices of the prepaid arrangements had been set very low and utilization was relatively high, facilities with a high proportion of prepaid patients fared less well financially than those with more FFS patients. Prices of any future prepayment arrangements will have to be increased;

- when prepaid arrangements were phased out by non-renewal of prepaid patients' contracts, most of these patients continued to use PROSALUD facilities on a fee-for-service basis.

D. Honduras

In 1983, the Honduran Ministry of Health and MSH jointly conducted a household survey of four Honduran health regions, in an effort to identify alternatives for financing PHC services and to assess the potential economic viability of these alternatives (PRICOR 1987:119). Members of slightly over a thousand households were interviewed. The survey found that:

- about 26 percent of the survey population reported having been ill within the 15-day survey period, but nearly half treated themselves at home, at a mean cost of \$2.50 US (most of which represented medicines);

- expenditures for health care, at over 11 percent of total reported monthly expenses, were the third

largest expenditure category for the survey households, after food and clothing; and

- an overwhelming majority (94 percent) of all respondents said they were willing to pay for health services supplied by the Honduran Ministry of Health, although it is not clear how much they were willing to pay (PRICOR 1987:119).

E. Jamaica

In 1987, in connection with its plans to encourage the development of non-governmental means of financing health services, the Government of Jamaica sponsored a survey on health services utilization in eight Jamaican parishes, focusing particularly on the use of three public hospitals serving these parishes (McFarlane and McFarlane 1987). The survey included questions on age, income, employment status, occupation, illness, choice of provider when ill, insurance coverage, and perceptions of quality. Findings included the following:

- among those perceiving illness (4), over 50 percent chose private ambulatory health care during the two-year survey recall period. Public health centers were the second most frequently chosen facility, followed closely by public hospitals. Only one percent of those seeking outpatient care used private hospitals;

- over the two-year survey recall period, three-quarters of the population visited a health facility at which fees were charged;

- the demand for private care was highest among the 20-59 age group, and fell in the 60-plus age group. The elderly represented the largest share of those visiting public health clinics, and the elderly plus those under 20 were responsible for the heaviest demand for public hospital services;

- about 12 percent of the population had some form of health insurance coverage. More females than males reported having insurance;

- survey respondents generally supported the idea of individuals' directly contributing to the costs of their health care, but the amount respondents were willing to pay was generally quite low.

(4) The percentage of the survey population perceiving illness was apparently not determined.

VI

Health Care Financing Alternatives

The term "alternative," as used here, refers to sources of health care financing other than general tax revenues. While general tax revenues remain the single most important source of health care financing in the LAC countries on which this report focuses, they have been expected to fund more and more services at the same time that overall economic constraints have reduced their availability. AID has therefore promoted health financing alternatives, in order to "free otherwise committed resources, leverage new resources, and more efficiently allocate scarce existing resources toward support of cost effective programs" (1986b:1).

Previous reviews of research on health financing alternatives include de Ferranti 1984 and 1985, Russell and Zschock 1986, Hoare and Mills 1986, Brenzel 1987, and Shepard and Benjamin 1988. In this chapter, we supplement these with findings from the HCF/LAC project and other recent research on three alternative sources of health financing: social security programs, direct user fee payments, and private, prepaid risk-sharing plans.

A. Social Security Programs

Social security (SS) programs are funded by mandated, wage-based contributions from formally employed workers and equal or greater contributions

from their employers. Medical care for SS beneficiaries is provided either directly, at facilities run by SS institutions, or indirectly, by existing public or private providers on a cost-reimbursement or subsidy basis. SS programs in Latin American countries generally provide medical care directly, while in the English-speaking Caribbean countries they either provide medical benefits through subsidies to public health services or offer no such support. In the Latin American countries, social security medical care programs represent up to a third of total health care expenditures (Zschock 1986).

For the LAC region, findings on SS systems have been reported by the HCF/LAC project from Peru, the Dominican Republic, Ecuador, Guatemala, Belize and St. Lucia.

1. *Peru.* In 1985-86, the HCF/LAC project analyzed prepaid, risk-sharing health care plans in Lima/Callao (Solari *et al.* 1987). Later, in 1987-88, the project provided technical assistance to the Peruvian Institute of Social Security (IPSS) on the financial implications of a legally-mandated extension of coverage of the institute's medical care program (Mesa-Lago 1989). Both studies built upon an earlier USAID-funded project, the HSA-Peru (Zschock 1988), which also included findings related to social security in Peru.

- In 1985-86, an estimated 18.6 percent of the Peruvian population was entitled to IPSS coverage, but many beneficiaries had no access to IPSS medical care because their employers failed to pay the mandated contributions, IPSS did not issue the required identification cards to all beneficiaries, or other reasons.

- A 1987 law mandating expansion of medical care coverage to certain previously excluded population segments was probably overly ambitious and unrealistic. The extension of coverage to dependent children up to the age of 14 in 1985 had already increased demand for IPSS medical services, with no corresponding increase in revenues.

- In 1987, the medical care program accounted for 58 percent of total IPSS expenditures. This share may have been higher because of unreported subsidies of administrative costs from other IPSS programs (e.g., invalidity, pensions).

- In all but one of the last 10 years, the IPSS medical care budget had been in deficit. A major reason was that some 35 percent of private employers evaded paying their contributions. Among explanations for nonpayment were rapid inflation (delaying payments reduced the real cost of the contribution to the employer) and inadequate registration and enforcement procedures. A newly-implemented computerized system for registration and collection may have improved collections, but was hampered by personnel cuts.

- Another reason for the IPSS medical care budget deficit was the failure of the government as employer to pay its legally-mandated contributions, in earlier years and again from 1986-1988.

- In 1988, IPSS medical care expenditures were allocated as follows: personnel, 48 percent; sickness and maternity subsidies, 20 percent; medicines and lab tests, 20 percent; administration, 8 percent; and contracted services, 5 percent. Cash subsidies for sickness and maternity, which could be collected for nearly a year, were paid at the unusually high rate of 100 percent of salary.

- In September, 1988, IPSS made plans to increase income and reduce expenditures by (a) increasing contribution rates, (b) controlling evasion and reducing payment delays, (c) collecting the government debt, (d) obtaining higher yields on medical care fund short-term investments, (e) reducing personnel, (f) suspending a legally-mandated integration of hospital services with those of the MOH, (g) cutting overtime, (h) restricting personnel travel, medi-

cal, and office supply expenditures, and (i) further reducing investment. All of these measures, however, would be politically difficult to implement.

2. *Dominican Republic.* In the Dominican Republic, the HCF/LAC project conducted a household survey and an analysis of demand for medical care in Santo Domingo (Gomez 1988; Bitran 1989).

- In Santo Domingo, 24 percent of the population had some kind of health care coverage by virtue of their employment and/or participation in a prepaid, risk-sharing plan. Of this group, 10 percent had social security (IDSS) medical care coverage, either as employees or dependents of employees. (Some IPSS beneficiaries were also covered by private health insurance plans.)

- IDSS operated its own medical care facilities, providing both outpatient and inpatient care. About 10 percent of all curative outpatient visits in Santo Domingo over a two-week survey recall period took place in IDSS facilities; the comparable figure for IDSS hospitalizations, over a recall period of 23 months, was 7.2 percent of all hospitalizations.

- Between 30 and 40 percent of IDSS medical care users, both outpatients and inpatients, were not IDSS beneficiaries, but were nevertheless treated free of charge at IDSS facilities. This apparently offset the proportion of IPSS beneficiaries who sought medical care from either private or public sector doctors.

- The quality of curative care offered by IDSS was generally perceived as poorer than that of comparable services provided in the private sector.

3. *Ecuador.* The medical care component of the Ecuadorian rural social security program (SSC) was analyzed as part of the HCF/LAC cost study (Gomez 1987). Among the study's findings, the following shed light on discreet characteristics of the SSC program:

- unit costs at SSC facilities were generally higher than at MOH or private facilities. The costs of medical treatments, for instance, averaged nearly 50 percent higher at SSC than at MOH facilities, mainly because of higher personnel costs. SSC facilities employed fewer personnel than MOH facilities, but they were more experienced and thus more costly;

- physician productivity (in terms of the average number of consultations/doctor/hour) was higher in SSC than in MOH facilities, but SSC physicians were also paid more than MOH physicians;

- SSC facilities offered a smaller number of final services than MOH facilities, mainly because they carried out fewer preventive and health promotional activities;

- in general, SSC facilities appeared more accessible to their (smaller) target populations than MOH facilities were to their (larger) target populations. Cost per patient was more than twice as high in the SSC program, reflecting not only higher salaries but also more ample supplies of medicines.

4. *Guatemala*. At the time of the HCF/LAC project's Guatemala study (Gwynne 1988), the country's Social Security Institute (IGSS), which covered agro-export workers only for accidental injury, was considering extending medical care coverage in the country's South Coast agro-export region by mandating employee/employer participation in two more programs, a maternal/child health program and a general medical care program. IGSS had not, however, decided whether the proposed extension of care would be offered through its own, public health, or private sector facilities.

- South Coast employers, many of whom felt they were not getting their money's worth out of their current mandatory contributions to the IGSS accident program, reportedly opposed extension of IGSS health services in their area.

- Some local observers predicted that any IGSS plan to extend medical care in the region, no matter what the mechanism chosen, would spur employers to try to exempt themselves from further contributions by organizing their own health services — probably through their regional or local agricultural and trade groups.

- The small number of currently-existing IGSS facilities in the area suggested to other local observers that IGSS should extend health care through the private sector. Private providers would be likely to respond positively, and cooperate in developing organizations to facilitate the administration of such a program.

5. *Belize*. One of the goals of the HCF/LAC project's Belize cost study (Raymond *et al.* 1987) was to examine the adequacy of an annual subsidy of US \$25,000 paid by the Social Security Board (SSB) to the Ministry of Finance for the treatment, at public health facilities, of work-related injuries to SSB enrollees.

- The SSB reported 713 work-related injury claims in 1984, for an average of US \$35 per claim.

- However, since SSB statistics did not differentiate between beneficiaries' use of inpatient and outpatient services, the proportions of the 713 claimants who were hospitalized and who received ambulatory care were unknown.

- When possible combinations of inpatient and outpatient treatment for the 713 claimants were simulated, the combinations of services that could be purchased for US \$25,000 at current public health facility costs suggested that the actual cost of services provided might have exceeded this subsidy.

6. *St. Lucia*. As in the Belize study, the HCF/LAC project's St. Lucia country study (Russell *et al.* 1988) attempted to assess the adequacy of an annual subvention of US \$560,000, paid by the National Insurance Scheme (NIS) for medical treatment of NIS enrollees at public health facilities (a wider range of medical benefits than in Belize was included).

- In St. Lucia, no system was in place by which to determine which patients treated at public facilities were NIS contributors. For this reason, it was not possible to simulate what combinations of inpatient and outpatient treatments provided to claimants the subvention would cover, as was done in Belize.

- As in Belize, it remained unclear whether the subsidy was adequate to cover the health care costs incurred by NIS enrollees.

B. User Fees

The term "user fees" refers to charges imposed at the time that health care is provided. The term is sometimes reserved for payments at public health services (*e.g.*, Overholt 1987:iii), but, more commonly (*e.g.*, de Ferranti 1984, 1985), it includes charges imposed in both the public and private sectors. Despite the widespread conviction in LDCs that health services should be free of charge, user fees are widespread. Most private spending on health is probably in the form of user fees (de Ferranti 1985), and in many countries even public providers charge some users for some health services, although the revenues thus collected are usually small (Hoare and Mills 1986:40).

Another pervasive belief, that the poor cannot pay user fees, is belied by studies showing that, in

some LDCs, members of low-income population segments pay for health care and pharmaceuticals; in many LAC countries, the urban poor spend an estimated two percent of their household income for health services and medicines and higher-income households pay up to four percent (Musgrove 1983). The user fee issue thus centers not on users' "willingness" to pay, but on equity: should low-income users of public health services pay fees, and how much should households with higher incomes be expected to pay for their health care, either directly in fees or indirectly through prepayment arrangements?

Aside from equity considerations, several other problems may hinder the widespread imposition of user fees. First, scaling user fees to income requires the use of a means test, difficult if not impossible to implement in many LDCs because of insufficient information. Second, the costs of collecting user fees may largely offset the additional income — especially where there is little experience with the management of user fees. Third, imposing fees may reduce utilization among the poor (*e.g.*, Bitran 1989; see also Overholt 1987:iv), or reduce consumption of other basic necessities.

Arguing for the imposition of user fees are the following considerations (see also World Bank 1987). First, in every country some proportion of the population can afford to pay for health care, and revenues collected from them could be used to pay for health care for those who cannot pay for it. Second, the poor are already paying more for private health care than they would pay, via user fees, at public facilities (de Ferranti 1985). Third, user fees will encourage users to be "sensible" in their demand for health services (World Bank 1987:26). Fourth, imposing fees for curative care (which, some studies suggest, are more collectible than fees for preventive or promotive services) can help to free scarce public resources for preventive care (Russell and Zschock 1986:44). Fifth, user fees may "enhance (users') community participation and sense of control" (*ibid.*:45), and also stimulate users to become sensitive to the quality of care they receive. Even nominal fees could thus help to raise quality — especially where dwindling public health budgets have necessitated reductions in funds for supplies and maintenance (Lewis 1987b:2-3).

Among the various cost recovery mechanisms available to LAC governments, then, user fees — despite some drawbacks — are of particular interest in that they not only generate revenues but also provide incentives for the efficient and effective use of

resources. Patients who must pay something for their health services are encouraged to value such services and at the same time discouraged from using them unnecessarily, and public institutions that are permitted to charge something for the services they provide — particularly if they are allowed to retain at least a portion of the revenues collected — are encouraged to provide the quantity and quality of services that users will continue to demand.

For these and other reasons, the World Bank has advocated user fees for government-provided health services as one of four related health financing policies that together constitute its "agenda for reform" (World Bank 1987:3-4). User fees are also an important component of the AID guidelines on health care financing, which spell out the agency's goal of encouraging LDCs to develop "sustainable" and "cost effective" health services programs, in part by imposing user fees for personal curative care (AID 1986b).

For the LAC region, recent findings on user fees have been reported in HCF/LAC project studies undertaken in Peru, Bolivia, Guatemala, the Dominican Republic, Belize, and St. Lucia. In addition, the REACH project has conducted user fee studies in the Honduras, the Dominican Republic, and Jamaica.

1. *Peru.* The HCF/LAC research study (Solari *et al.* 1987) and technical assistance report (Mesa-Lago 1988) on Peru yielded the following findings on user fees:

- at the time of the two studies, worsening economic conditions in Peru had curtailed the government's ability to maintain its health services. This had resulted in increased use of private sector health care, especially by middle- and lower-income Peruvians who had previously used public sector facilities;

- of the estimated 20 percent of the Peruvian population (about four million people) who relied on the private sector for health care, about 2.2 million received health care provided by private voluntary organizations, some of which required substantial user fees. Another half a million were covered under various prepaid plans, some of which required copayments. The remainder, by inference, paid directly for the health care they consumed.

2. *Bolivia.* PROSALUD — the network of private-sector PHC establishments initially supported by USAID/Bolivia — has experimented with both prepaid plans and user fees (Rosenthal *et al.* 1988).

- At the time of the HCF/LAC research study, there were wide differences, within the PROSALUD

system, in facilities' potential for self-financing, largely due to the impact of prepaid plans on both costs and revenues. Because of the prepaid plans' low fees and relatively heavy utilization, beneficiaries did not contribute to cost recovery as much as did patients who paid user fees directly.

- At the time of the study, PROSALUD had begun to phase out the prepayment option by non-renewal of contracts. Most patients, however, continued to use PROSALUD on a fee-for-service basis, so PROSALUD's action improved cost recovery.

- The study substantiated the finding, reported in other studies (Overholt 1987, Lewis 1987b, Shepard and Benjamin 1988), that at least some members of low-income population segments are able and willing to pay reasonable user fees, and that such fees can contribute substantially to cost recovery at PHC facilities.

3. *Guatemala*. The HCF/LAC Guatemala study (Gwynne 1988) included several findings on user fees.

- The most common mode of health services delivery in the study area, the South Coast, was ambulatory care by local private physicians and pharmacists who charged fees for their services. Payment methods varied; in some cases, patients were charged directly; in others — if the patients worked on agro-export farms — their employers paid all or part of the bill.

- Many other kinds of private health care delivery arrangements existed in the region at the time of the study. Farm owners provided on-site health services for their workers, contracted for periodic visits from doctors, or sent their workers to doctors in nearby towns; religious and other charitable organizations ran clinics; agricultural and other trade organizations sponsored health services on or off the larger farms; private hospitals contracted with farms or trade organizations to provide services to workers. Some of these arrangements were free to users; fees were charged for others. Payment methods varied; in some cases there was a two-tiered fee schedule, with program affiliates paying less than non-affiliates, or a sliding fee schedule.

- In general, however, the poverty of much of the target population restricted the amount of funding for health care that could be generated from user fees.

- The study concluded that a combination of user fees and financial support from plantation owners, whether organized through their trade associations or

through philanthropic organizations, represented a feasible long-term financing arrangement for health services in the area.

4. *Honduras*. In 1987, the REACH project investigated user fees in the public health system of Honduras, where such fees had been charged in both hospitals and lower-level facilities for many years (Overholt 1987).

- User fees were an increasingly important revenue source for Honduran hospitals, which had established their own fee schedules and retained the right to spend the fee revenues they generated, subject to certain restrictions (*ibid.*:iii, v) (5).

- Patients who were unable to pay were exempted through formal or informal means (*ibid.*:iv).

- Typically, hospitals charged fees for admissions, outpatient visits, and outpatient lab and x-ray services.

- Revenues earned from fees varied by hospital type, ranging as high as 16 percent or more of district hospitals' non-personnel budgets.

- Fee revenues were spent on a wide variety of inputs, including supplies and material, casual labor, and per diems for training visits (*ibid.*:iv). In spite of government budgetary constraints, hospitals had been able to maintain the quantity and quality of their services.

- The exemption mechanisms that guaranteed access to health services for those who could not pay apparently allowed many of those who could afford to pay to escape payment. Between 25-60 percent of inpatients at the National Hospital, for example, were not formally exempt, yet did not pay any fees. It was estimated that if all individuals who could afford to pay actually did so, fee revenues would more than double.

- Fees charged for consultations at large public health centers generated substantial revenues, which were used for regional PHC and child survival programs.

5. *Dominican Republic*. In the Dominican Republic, some user fees were being charged for both outpatient and inpatient care in public hospitals (Bitran 1989), despite the fact that (according to Lewis 1987b:5) charging user fees for inpatient serv-

(5) The accuracy of this finding was questioned by participants at the HCF/LAC Final Meeting, at which this report was reviewed.

ices at public facilities was prohibited by the government (the policy concerning charging fees for outpatient care was ambiguous). The REACH project investigated user fees at 10 ministry of health facilities distributed throughout the country: nine hospitals and the National Laboratory (Lewis 1987b).

- While user fees were officially prohibited for inpatient care, all 10 facilities studied charged fees for outpatient services. Since there was no government regulation of these charges, they varied considerably across the 10 facilities, each of which also designed its own collection system and independently decided how to spend collected revenues.

- Even though outpatient charges rarely exceeded 10 percent of private sector prices for similar services, revenues from these charges were an important source of hospitals' operating funds. They provided the largest proportion of resources for operating expenditures, other than personnel, of the hospitals studied.

- The individual hospitals' use of the revenue collected from user fees most frequently included pharmaceuticals purchases, additional personnel expenditures, maintenance, and the purchase of other supplies.

- A means test was used to waive fees for poor patients or provide discounts to those who could pay only some of the amount charged. About half of all patients at the hospitals studied paid nothing or only part of what was charged, but decisions either to waive all fees or to offer discounts varied across facilities, some of which required at least a nominal payment of all patients.

- The study's author felt that the Dominican Republic should sanction user fees for inpatient as well as outpatient services, since — among other things — inpatient services represented the largest share of hospital budgets, and the current fee structure encouraged patients, since they were not charged for inpatient care, to enter the system through emergency or inpatient care for basic treatment.

The HCF/LAC project, which analyzed the demand for medical care in Santo Domingo using household survey data, shed additional light on the role of user fees in Santo Domingo (Gomez 1988; Bitran 1989).

- Despite the government prohibition on user charges for inpatient care (Lewis 1987b:10), some inpatients as well as many outpatients were paying user fees at public health facilities. At the time of the

study, about 10 percent of all those receiving curative care at these facilities, whether outpatient or inpatient, paid user fees. The charges averaged US \$7.70 for outpatient care and US \$90.00 for hospitalization. (In contrast, average private subsector expenditures were US \$13.00 and US \$132.00 for outpatient and inpatient care, respectively.)

- Among patients seeking outpatient curative care in Santo Domingo, there was a strong preference for private physicians across all household income levels. This shows that even poorer residents of Santo Domingo were willing to pay for what they perceived to be better quality health services.

- While lower-income patients were more sensitive to price than higher-income patients, when the effects of higher prices on the utilization of outpatient health services in both the private and public subsectors were simulated, the results suggested that higher fees would reduce overall utilization rates only slightly, even among those with low incomes.

- Raising prices would, however, affect the subsectorial distribution of those seeking care. Specifically, if private physicians' prices for outpatient care were to increase, so would the tendency to seek health care from public and social security physicians, for all but those at the highest household income level (6).

6. *Jamaica*. In 1988, a third hospital user fee study was carried out under the REACH project in Jamaica (Lewis 1989). An existing user fee schedule was outdated, and all revenues from fees had been submitted to the government's Consolidated Fund. This policy was revised in 1985 to allow hospitals the use of half their revenues from user fees. However, the fees to be earmarked for use by hospitals had to be identified as "contributions," and hospitals had to submit separate budgetary proposals on the purposes for which these contributions were to be expended. The user fee study found that

- over the period 1983-87, while public health spending declined, the share allocated to PHC increased proportionately and hospital expenditures decrease proportionately;

- hospital personnel expenditures rose proportionately as expenditures decreased, and the shares of supplies and maintenance decreased;

(6) Because of data limitations, the HCF/LAC study team could not estimate the effects of price on subsector choice for hospitalization.

- these overall findings helped explain the decision to increase user fees and collection rates, and to allocate these resources to supplies and maintenance;

- hospitals were expected to charge fees equivalent to those in the private sector, but patients were to be charged based on ability to pay, and on the basis of having private insurance coverage;

- revenues from direct user fees had risen substantially over the past three years, but the attempt to increase revenues from patients' private insurance policies had been less successful;

- the proportion of hospital budgets accounted for by fees, which ranged between 2-10 percent in 1984, had increased to a range between 6-27 percent in 1987;

- the major problems associated with the government's new hospital fees policy were "the inability or unwillingness of hospital management to handle fee collection in a systematic fashion" (*ibid.*:25), and the failure of public hospitals to collect from private insurance companies (*ibid.*:26).

7. *Belize*. The issue of user fees was a major component of the HCF/LAC project's Belize study (Raymond *et al.* 1987), one of the goals of which was to update the public health service's outdated fee schedule.

- Direct consumer expenditures for health in Belize were a large share of total health sector expenditures. Households paid directly for private medical care and medicines, and for certain services provided at public hospitals and clinics.

- The MOH, however, generated only about one percent of its operating budget from fee collections at the major public hospital, because fees were low and their collection often overlooked.

8. *St. Lucia*. For St. Lucia, the HCF/LAC project's study (Russell *et al.* 1988) provided two findings concerning user fees:

- fee schedules for publicly-provided health services existed in St. Lucia, but — at the time of the study — an estimated 92.7 percent of the population was legally exempt from paying fees at public facilities;

- the small amount that Victoria Hospital was entitled to collect in user fees was made even smaller because of non-collection of payable fees or because the hospital often charged those who were required to pay considerably less than the stated fees.

C. Private, Prepaid Risk-sharing Plans

The various arrangements subsumed under the term "private, prepaid risk-sharing plans" (see GHAA 1985) share three common elements. First, all involve spreading the risk of incurring health care expenses across a group of people. Second, all are pre-arranged: payment is made before any expense is incurred. Third, payment is independent of the actual amount of services used by any individual; instead, it is predicated on the estimated costs of utilization of services by the insured group as a whole.

In the last decade, various forms of private, prepaid risk-sharing plans have expanded their coverage significantly in several metropolitan areas of the LAC region (GHAA 1985), although the overall extent of their coverage still remains limited. In smaller towns and rural areas, third-party arrangements, where they exist at all, cover only a small share of the population. Recent research findings on such arrangements have been reported by the HCF/LAC project for Peru, Bolivia, and Guatemala. In addition, USAIDs have directly sponsored studies of the feasibility of instituting such arrangements in the Dominican Republic, Ecuador, and Jamaica.

1. *Peru*. The HCF/LAC project's Peru study (Solari *et al.* 1987) investigated the potential for growth of private, prepaid risk-sharing plans in Lima/Callao, where a number of such plans were in operation and covered approximately eight percent of the metropolitan area's population.

- Private, prepaid risk-sharing arrangements available at the time of the study fell into four basic types. The first, which had captured 45 percent of those covered, consisted of health insurance policies offered by general insurance companies and sold, directly or through brokers, to families or groups of employees. The second, the employer-sponsored health fund, was usually associated with large companies; most such funds served as administrative tools by which employee and employer contributions were collected and administered. The funds were administered either directly by the company or, for a fee, by an outside administrator. Under the third type, the "broker-as-coinsurer" plan, the administrator of a health fund agreed to assume some of the insured group's risk — up to the total of the fund's pool of contributions. If total claims surpassed this amount, the fund raised the necessary amount to pay the debt,

but if total claims were less than revenues for a given period, the broker retained the difference as his profit. The second and third types together accounted for another 45 percent of those covered. Finally, Lima had four HMO-like plans, sponsored by private hospitals. These accounted for the remaining 10 percent of total prepaid coverage.

- Many of those in Lima/Callao who were privately insured were also covered by social security. They either preferred to use private health services, or used them to supplement their social security benefits.

- The potential demand for private health insurance in Lima/Callao was great, particularly if such arrangements were to lower their prices, and if urban social security and public health services did not improve in quality and efficiency.

- Factors that would tend to hinder the development of private prepaid schemes in Lima/Callao were a general lack of managerial skills, the opposition of physicians to negotiated fees, and high mandatory contributions to the social security system, which made additional private coverage very costly.

2. **Bolivia.** At the time of the HCF/LAC project's Bolivia study (Rosenthal *et al.* 1988), PROSALUD was attempting to achieve complete self-financing using a combination of user fees and a prepayment plan.

- The wide differences in the potential for self-financing within the PROSALUD system were largely due to the impact, on both costs and revenues, of the low price being charged for the prepaid plan.

- When PROSALUD began to phase out prepaid patients via non-renewal of contracts, most previously prepaid patients continued to use PROSALUD facilities on a FFS basis, and the facilities became financially viable.

3. **Ecuador.** In 1985, a USAID-supported study was carried out in Ecuador to develop an (ultimately self-financing) private sector strategy to improve PHC delivery in rural and low-income urban areas currently underserved by the MOH and the urban and rural social security programs (TRITON 1985).

- At the time of the study, an estimated 50 percent of the population in rural areas of Ecuador lacked access to basic health services.

- The services of the MOH were perceived as ineffective and non-responsive to people's needs.

- The report proposed the implementation of two demonstration projects, both community health

facilities (one rural and one urban), each employing its own personnel and characterized by an emphasis on health education and promotion activities, home visits, and outpatient care.

- The study proposed that both efforts be financed by a combination of prepayment arrangements and copayments, with an eventual emphasis on the former. The demonstration projects were to begin in September, 1985, but no results have been published.

4. **Dominican Republic.** A recent USAID-sponsored study assessed the feasibility of establishing an HMO as a business venture in the Dominican Republic (ALICO 1987).

- At the time of the study, group practices called *iguales medicas* already existed in the Dominican Republic. They offered prepaid health services packages, and primarily covered lower- and middle-income workers.

- These practices, comparable to HMOs, accounted for 75 percent of all health insurance coverage.

- Although a market niche for an "upscale prepaid managed care plan" appeared to exist, it was the opinion of the study's authors that the enrollment and premium level necessary to support such a plan as a commercially viable operation were unattainable at the time.

5. **Jamaica.** USAID also sponsored an exploratory study of alternative strategies for privatization in the Jamaican health sector, in the face of perceived quality and cost-effectiveness problems in both the large public and smaller private health sectors (Rice, Ramey and McGriff n.d.).

- Several new forms of public/private partnership were proposed, of which three included some form of prepayment for health care: a new National Insurance Plan, to be administered by a private entity; a "voucher option," in which Jamaicans could use their *per capita* share of recurrent health expenditures to purchase either a public or private sector health plan; and a trust fund to subsidize a "poor-only HMO" (*ibid.*:36).

In 1985, Project HOPE prepared a preliminary analysis of the alternative financing options under consideration by Jamaica's Committee on Alternative Methods for Financing the Health Services (Garrison and Wilensky 1985).

- The study proposed a plan under which the employed would contribute a proportion of their earnings to a Health Insurance Fund, and would in turn purchase a package of health services that would be delivered by providers (whether public or private was left undecided) who would bill the Fund according to a fee schedule set by the government. Patients would pay the difference, either out-of-pocket or through private insurance, between what was allowed under the fee schedule and the actual cost of services. Health care for the indigent would be paid for from the Consolidated Fund (7).

USAID also studied the possibility of setting up a managed, prepaid health services organization (akin to an HMO) in Trelawny Parish (Zukin and Weinberg 1986). However,

- the population was found to be too poor to support an HMO; instead, it was recommended that a different parish be selected or that Trelawny be combined with another parish for purposes of implementing the HMO idea (8).

6. *Guatemala*. The HCF/LAC Guatemala study (Gwynne 1988) reported that several kinds of private, prepaid risk-sharing health care arrangements already existed on the South Coast of Guatemala at the time of the study.

- The study team felt that the best way to provide prepaid coverage for the greatest number of agro-export workers (and their dependents) was through existing agricultural organizations such as the coffee-growers' association.

(7) Participants at the June, 1989, HCF/LAC Final Meeting reported that, due to restrictions on the imposition of new taxes, the Health Insurance Fund had not been established.

(8) Participants in the June, 1989 HCF/LAC Final Meeting reported that a private HMO was established in Jamaica in 1986, offering prepaid health plans of the "preferred provider" type to firms with five or more employees (see Lewis 1988b:58).

VII

Conclusions and Recommendations

This chapter is based on the research reviewed above and on comments and suggestions that emanated from the HCF/LAC project's fourth annual workshop, held in June, 1989, at which participants (see Appendix III) reviewed a preliminary draft of this report.

A. Conclusions

1. *Context.* The economic crisis that beset most LAC countries over the past decade has reduced their public health expenditures, both absolutely and as a proportion of GDP. Even greater has been the deterioration of the quality of public health care. While general tax revenues remain the most important source of health care support, accounting for anywhere from 30 to 80 percent of total health sector financing in the 10 LAC countries reviewed here, these countries tend to assign increasing importance to social security and private sector financing alternatives.

The economic crisis has apparently stimulated private health care spending, which appears to have risen as a proportion of total health sector financing. The World Bank and AID, as the main sources of international health development support, have encouraged the general tendency toward diversification of health sector financing; these donors have urged

public health authorities to reallocate resources from hospital to primary and preventive care and to rely more heavily on alternative sources of financing.

2. *Costs.* Cost studies at the primary care level have found that the annual total costs of otherwise comparable health centers, as well as the unit costs of services they deliver, vary widely — both within and among subsectors (*i.e.*, public, social security and private). These variations are explainable by differences not only in the centers' efficiency of resources utilization, but also in the variety, quantity, and quality of final services they produce.

At the hospital level, cost studies have found that large facilities account for even bigger proportions of the total cost of public health services than standard expenditure accounts show. Identifying fully-accounted-for facility costs, as well as the unit costs of individual departments and the services they provide, creates a basis for political and management decisions on cost containment, cost recovery, quality improvement and equitable resources allocation.

3. *Demand.* Studies of the demand for health care show that households — and employers, acting for their employees — account for between 20 and 40 percent of total health sector expenditures in the 10 LAC countries reviewed here. These expenditures include direct payments for both public and private

care, purchases of medicines, and payments for coverage under private, prepaid plans. Private practitioners, for example, provide over a third of all ambulatory care in Lima and over half in Santo Domingo.

Simulations, based on household survey data, suggest that if user charges for *outpatient* care in public hospitals were introduced or increased, within reason and with exemptions for the poor, overall health services utilization would not decline significantly, but many users of public health services would switch to private providers whose services they consider to be of higher quality and/or more readily accessible than public services. Demand for *inpatient* care more strongly favors public facilities, because they are in far more ample supply than private hospitals and because private hospitalization charges are not affordable by most households. Demand studies also show that even very low-income households make some payments for health care (especially medicines), but that most of the cost of the health care they need must be borne by providers that are publicly funded or supported by private charitable sources.

4. **Health care financing alternatives.** Research findings emphasize the important role that social security plays in financing medical care, especially in Latin American countries. In the seven Latin American countries reviewed here, medical care under social security accounts for 20 to 30 percent of total health sector expenditures; in the three Caribbean countries, social security contributes up to 10 percent (Belize, St. Lucia) or nothing at all (Jamaica).

Social security mainly covers urban middle-income workers and their dependents, although a rural program in Ecuador demonstrates that coverage can be extended to agricultural communities as well. The cost of medical care under social security is generally higher than the cost of public or private health services, yet many beneficiaries consider the quality of this care to have deteriorated in recent years.

Studies of private, prepaid health plans show that these alternatives are still emergent, but in some areas are already an important component of total health sector financing. Private, prepaid plans include insurance plans (individual and group policies) as well as employer-, community-, and provider-managed plans. Lima and Santo Domingo, where these plans account for about 10 percent of total coverage, are the leading examples of their potential for providing

coverage in large urban areas. In a few smaller cities and agro-export areas, employers (or employer organizations) and communities (or cooperatives) are providing ambulatory care financed by prepaid plans and/or user fees. Some of these plans demonstrate the potential for expansion of ambulatory care, but they generally do not provide inpatient care (except normal deliveries).

B. Recommendations

The following recommendations are grouped by subsector: public health services (primarily ministries of health), medical care provided under social security, and private health services. Issues of household demand for health care, including payments directly to providers or through health insurance or other prepayment plans, cut across the three subsectors and are reflected in recommendations under all three subheadings.

1. **Public health support.** Since LAC countries provide health care for poor and lower-middle-income population segments predominantly through government programs funded from general tax revenues, international health development support should continue to focus on strengthening these programs. The following financing arrangements are recommended:

- personnel expenditures for public health services should be limited to that proportion of aggregate (ministry of health) and facility-level operating budgets which allows for appropriate shares for other line items (e.g., supplies, maintenance, etc.), so as to maintain quality of care under inevitable budget constraints; issues of cost control, particularly for personnel and other budget line items (e.g., imported equipment and supplies), need to be addressed at the appropriate locus of power and responsibility;

- cost containment is more complex at hospitals than primary care facilities, and the magnitude of resources involved is far greater. Thus, hospitals should be the main focus, initially, of newly-introduced cost containment measures. Hospital cost containment, in particular, requires reevaluation of functional responsibilities (e.g., reducing the volume of outpatient services), and of appropriate technologies of care;

- since it is unrealistic (and not necessarily advisable) to limit access to inpatient care at public health facilities to priority population groups, these facilities should charge reasonable user fees, subject to means

testing, and bill patients who have private, prepaid plans. Most of the revenues collected should be retained and directly managed by hospitals and health centers as an incentive to improve the quality of care they provide;

- increased cost recovery, especially at hospitals, requires that political commitments to "free" health care are interpreted as referring to those who cannot afford to pay. Since even relatively affluent households need protection against the risk of incurring "catastrophic" payment obligations, user fees would encourage them to obtain health insurance (or join a prepayment plan) that can help pay their hospital bills;

- hospital services should be subject to "full cost pricing." This does not mean that patients — even relatively affluent ones — should be expected to pay the full cost of services they receive; full cost pricing, however, provides the basis for determining to what extent services should be financed from user charges (subject to a means test), from patients' social security benefits, from private health insurance or other prepayment plans, from general tax revenues, and from other sources (*e.g.*, domestic and international charitable donations, international health development assistance, etc.). Full cost pricing should also serve as a basis for cost containment, such as limiting high-cost services to those considered essential, and redirecting patients seeking ordinary ambulatory care to health centers;

- user fee exemptions, both at hospitals and primary care facilities, require standardized means testing, for which appropriate criteria and procedures need to be periodically reviewed; health identification cards could be issued to show patients' exempt status and/or beneficiary status (under social security, private health insurance, etc.), as well as to record basic personal medical data;

- public health authorities, with international health development assistance, should devise system-wide efforts to promote cost containment and cost recovery strategies; this includes implementing coordinated revenue collection, medical data recording, and cost accounting procedures; training facility managers and medical staffs in the use of the data thus generated; and developing legal and institutional models that encourage managerial autonomy and physician peer review;

- costs of similar services should be compared among facilities so that cost variations and their causes can be identified; cost containment should

involve appropriate distribution of responsibilities, and corresponding allocations of resources, among levels of care and types of facilities;

- public health professionals, from national level appointees to facility managers and staffs, must be trained in cost containment measures that enhance the productivity of resources, and their utilization in conformance with standards considered appropriate for specific levels and settings of public health care delivery; appropriate incentives should be used to encourage and reward productivity-enhancing cost containment accomplishments;

- any decision to introduce (or expand) user fees at public health facilities should be preceded by a realistic projection of revenues to be collected, and an equally realistic estimate of the costs of collection. Net revenues should be of sufficient magnitude to finance specific improvements needed to increase a facility's overall quality of care and equity of access (*i.e.*, its effectiveness);

- if a facility has been judged suitable for cost recovery, the level of its financing from general tax revenues (and possibly from social security revenues as well) should (within limits) be conditional upon revenue generation from cost sharing;

- evidence of user dissatisfaction (from household surveys) and facility underutilization (from institutional records) shows that reductions in financing have caused public health services to become less cost-effective; *qualitative* improvements in public health services, reflected in most of these recommendations, are therefore basic to increasing the cost-effectiveness of services delivery and expanding public health coverage.

2. Social security support. The high costs and low coverage of medical care under social security have in the past kept the World Bank and AID from providing them with health development assistance, but this is currently under review. The potential for increasing the cost-effectiveness of medical care under social security is great. Specific recommendations include the following.

- Provide technical assistance to those programs that have already decided to extend full coverage to all dependents of covered workers. Implementing this decision would require significant changes in the cost structures of these programs, such as reducing hospital-centered services in favor of expanded ambulatory care centers, and increasing the productivity of the programs' relatively costly personnel resources.

- Increasing the rates of wage taxes to increase social security revenues is not recommended, because (together with other benefits) wage taxes already represent a heavy payment burden on employers and workers alike. Instead, the collection of wage taxes should be improved, although this requires simultaneous improvements in the quality and accessibility of medical services to which covered workers are entitled.

- Those governments that — as employers — have fallen behind in their mandated contributions to social security should not expect public sector employees to be served by medical care under social security unless the legally mandated transfers of revenue take place; not doing so represents an implicit additional tax on those private employers and employees who do contribute to these programs.

- Expansion of coverage to population groups with lower average earnings than those currently covered is possible; however, since social security programs are not generally intended to redistribute income (or benefits), the marginal cost of coverage for new groups must be lower than the average cost of serving current beneficiaries; this could be accomplished by financing primary health care expansion through a prepayment plan for the newly covered, while financing their hospital care through internal cross-subsidies, or even from general tax revenues.

- Primary care centers financed by social security programs should provide most of the same preventive services that public health centers offer. While this may increase the total cost of centers (depending on the mix and total volume of care), a greater variety of services offered is likely to decrease their average unit costs, and thus facilitate the further expansion of coverage.

- The information systems (*i.e.*, expenditure, utilization and cost accounting) of medical care programs under social security are at least as deficient as those of public health services and need similar improvements; moreover, public health and social security information systems should be compatible so that unit costs of similar services can be compared not only within the respective subsectors but also between them.

- While partial cost recovery from user fees in public health facilities is recommended, and to some small extent practiced, the same has generally not been the case for medical care programs financed through social security. However, just as private health insurance and other prepayment plans in many

cases require co-payments (as restraints against unnecessary utilization, if not for cost recovery *per se*), so could social security programs. Co-payments may be more acceptable to employers and employees than further increases in wage tax rates.

- Inasmuch as many social security beneficiaries already have supplementary private insurance or other prepayment plans, whether and how medical care under social security could be co-financed from private forms of risk-sharing should be explored (again, as an alternative to increasing social security taxes).

- As an alternative to providing medical care directly for most of their beneficiaries (as is the case in the Latin American countries reviewed here), social security programs should examine the alternatives of providing medical care benefits through public and/or private providers on a capitation or reimbursement basis. This option is already available, to a limited extent, in some of these countries, and may be suitable particularly for the expansion of coverage to lower-income population segments in urban areas and to workers and their families in agro-export areas.

- In the Caribbean countries, the use of social security revenues for medical care is limited, so far, to poorly-defined transfer payments to public health services. It is inadvisable for social security programs in Caribbean countries to develop their own medical care facilities; they should therefore decide on appropriate arrangements with either public or private providers. This, in turn, requires that average unit costs of care be available as a basis for determining how much social security programs should contribute for the coverage of their beneficiaries.

3. *Private sector support.* User fee payments, already frequently referred to above, are — next to general tax revenues and social security taxes — one of the three main sources of health care financing in all 10 countries reviewed here. Many households directly pay for private care and purchase medicines from private pharmacies; for the poor, this can be a substantial drain on their meager resources. For this reason, and given these countries' preference for government financing of health care (from general and social security taxes), the substantial proportion of total health care financing accounted for by direct household payments should be recognized by all concerned.

- The burden of direct payments for low-income households should not be further increased by the im-

position of user fees in public health services; this is generally accepted, as evidenced by exemptions for the medically indigent. Between one-third and two-thirds of the populations of the 10 countries reviewed here should be assumed to be exempt, except for nominal fees that may be needed to control or even to stimulate utilization of primary health services (the latter if the target population thinks of free care as being of low quality).

- Among the one-third to two-thirds of the population who do not qualify for exemption from user fees, based on means testing, the potential demand for private, prepaid risk-sharing plans is evident. The development of these plans should be encouraged.

- The recommendation (above) to encourage the development of private, prepaid risk-sharing plans is to some extent predicated on the assumption that demand for such coverage reflects a real preference for private care, rather than a reaction to the poor quality of care provided by public health and social security programs. It should also be determined whether the development of these private sector alternatives needs active support from public and international agencies or merely a permissive regulatory environment.

- Private health care financing alternatives, while they can be important as risk-sharing arrangements, run the danger of stimulating unnecessary demand for health care, and of being costly to operate, particularly if their membership is relatively small. These plans should therefore require some co-payments to control utilization and help prevent — rather than contribute to — unnecessarily costly provision of health care.

- While there is evidence that private health services can become financially self-sustaining at the primary care level, their success also reflects the failure of public health systems to provide the necessary coverage for low-income populations. Especially if

self-financing private services are to be established in new locations, the underlying assumptions favoring user fee payments (or even prepayment) by low-income households should be reviewed from the perspective of equity.

- Household demand studies have brought to light extensive cross-utilization of health services among subsectors, regardless of beneficiary status. This suggests that health systems are disorganized and resources utilization is highly inefficient. Thus, the reasons for apparent private care preferences, and for the extensive cross-utilization of services, should be more systematically analyzed.

- Nothing in the research studies reviewed here shows that private sector alternatives are necessarily more cost-effective or unequivocally preferred by households; households seek the best quality care they can afford, and strongly prefer doctors over paramedical workers. These household survey findings suggest a shift in health policy emphasis from "lower cost" to "higher productivity" alternatives in the delivery of primary health care.

- Finally, the public/private goods distinction, applied to preventive/curative care, that has been used in the World Bank's "agenda for reform" of health financing is not strongly supported by the research reviewed here. Curative care for the medically indigent is generally accepted as a public sector responsibility, and health authorities view curative and preventive care as interactive and mutually supportive. Policies favoring private financing of curative care would be more convincing, particularly in the LAC countries reviewed here, if they were based on household income rather than cost/benefit considerations, and if they took account of the fact that households and private employers already contribute substantially — through direct user fees, prepayment plans, and social security payments.

Appendix I

HCF/LAC Project Documents

General

1. Russell, Sharon Stanton, and Dieter K. Zschock (eds.). **Health Care Financing in Latin America and the Caribbean: Research Review and Recommendations.** Research Report No. 1, HCF/LAC (SUNY/Stony Brook), April, 1986.
2. **Country Study Guidelines.** HCF/LAC (SUNY/Stony Brook), January, 1987.
3. **Updates:** No. 1, April, 1986; No. 2, November, 1986; No. 3, April, 1987; No. 4, January, 1988; No. 5, October, 1988; No. 6, September, 1989.
4. Gwynne, Gretchen, and Dieter K. Zschock. **Health Care Financing in Latin America and the Caribbean, 1985-89: Findings and Recommendations.** Research Report No. 10, HCF/LAC (SUNY/Stony Brook), September, 1989.
2. Meissner, Paul. **Scope of Work: Establishment of a Primary Care Facility for the Belize Banana Control Board.** HCF/LAC (SUNY/Stony Brook), February, 1987.
3. Raymond, Susan Ueber, Barbara Lewis, Paul Meissner, and Jeremiah Norris. **Financing and Costs of Health Services in Belize.** Research Report No. 2, HCF/LAC (SUNY/Stony Brook), June, 1987.

Bolivia

1. Solari, Alfredo. **Exploratory Report: Options for Health Care Financing Studies in Bolivia.** HCF/LAC (SUNY/Stony Brook), March, 1986.
2. Rosenthal, Gerald, Antonia Arrazola, Gail Marie Crowley, Carlos Javier Cuellar, and Alfredo Solari. **Toward Self-Financing of Primary Health Services: A Market Study of PROSALUD in Santa Cruz, Bolivia (with epilogue).** Research Report No. 6, HCF/LAC (SUNY/Stony Brook), July, 1988.

Belize

1. Norris, Jeremiah. **Exploratory Report: Options for Health Care Financing Studies in Belize.** HCF/LAC (SUNY/Stony Brook), June, 1986.

Dominican Republic

1. Mesa-Lago, Carmelo. **Exploratory Report: Options for Health Care Financing Studies in the Dominican Republic.** HCF/LAC (SUNY/Stony Brook), June, 1986.
2. Gomez, Luis Carlos. **The Demand for Health Care in the Dominican Republic: Study Design.** HCF/LAC (SUNY/Stony Brook), April, 1987.
3. Gomez, Luis Carlos. **Estudio sobre Demanda de Servicios de Salud en Santo Domingo, Republica Dominicana, 1987: Metodologia.** HCF/LAC (SUNY/Stony Brook), March, 1987.
4. Gomez, Luis Carlos. **Household Survey of Health Services Consumption in Santo Domingo, Dominican Republic: Methodology and Preliminary Findings.** Research Report No. 8, HCF/LAC (SUNY/Stony Brook), September, 1988. Spanish translation: **Encuesta de Hogares sobre Consumo de Servicios de Salud en Santo Domingo, Republica Dominicana: Metodologia y Hallazgos Preliminares.** HCF/LAC (SUNY/Stony Brook), September, 1988.
5. Duarte, Isis, Carmen Julia Gomez, Maritza Molina, and Gerard La Forgia. **Organizacion, Cobertura, Financiamiento y Utilizacion de los Servicios de Salud del Distrito Nacional por Sectores.** Santo Domingo, Dominican Republic: IEPD (Instituto de Estudios de Poblacion y Desarrollo), September, 1988.
6. Bitran, Ricardo. **Household Demand for Medical Care in Santo Domingo, Dominican Republic.** Research Report No. 9, HCF/LAC (SUNY/Stony Brook), October, 1988. Spanish translation: **Demanda Familiar para Atencion Medica en Santo Domingo, Republica Dominicana.** HCF/LAC (SUNY/Stony Brook), March, 1989.

Ecuador

1. Gomez, Luis Carlos, Luis Asis-Beirute, Oswaldo Egas, and Robert L. Robertson. **Costs of Primary Health Services in Ecuador: Study Design.** HCF/LAC (SUNY/Stony Brook), April, 1986.
2. Robertson, Robert L. **Costs of Primary Health Services in Ecuador: Guidelines for Data Collection, Processing, and Summarizations.** HCF/LAC (SUNY/Stony Brook), May, 1986. Spanish translation: **Costos de Servicios Primarios de Salud en Ecuador: Guia para la Recoleccion, Procesamiento, y Resumen de los Datos.** HCF/LAC (SUNY/Stony Brook), May, 1986.
3. Gomez, Luis Carlos (ed.). **Costos de los Servicios Basicos de Salud en Ecuador** (with an English summary prepared by Dieter K. Zschock). Research Report No. 4, HCF/LAC (SUNY/Stony Brook), January, 1989.

El Salvador

1. Gomez, Luis Carlos. **Estudio de la Demanda de Servicios de Salud en el Salvador: Alcance del Estudio.** HCF/LAC (SUNY/Stony Brook), February, 1987.

Guatemala

1. Fiedler, John L., and Alfredo Solari. **Primary Health Care Services and Agro-export Farmworkers in Guatemala: Study Design.** HCF/LAC (SUNY/Stony Brook), September, 1987.
2. Solari, Alfredo, and John L. Fiedler. **An Analysis of the Role of the Guatemalan Private Sector in the (New) Project "Improved Family Health."** HCF/LAC (SUNY/Stony Brook), September, 1987.
3. Gwynne, Gretchen (ed.). **Private Sector Health Care Alternatives for Agricultural Workers on the South Coast of Guatemala.** Research Report No. 7, HCF/LAC (SUNY/Stony Brook), August, 1988.

Peru

1. Castaneda Costa, Julio, Judith Davidson, Alfredo Solari, Jose Carlos Vera, and Dieter K. Zschock. **Private Sector Health Care Alternatives in Lima, Peru: Study Design.** HCF/LAC (SUNY/Stony Brook), April, 1986.
2. Solari, Alfredo, Julio Castaneda Costa, Gail Marie Crowley, and Jose Carlos Vera. **Private Health Care Financing Alternatives in Metropolitan Lima, Peru.** Research Report No. 3, HCF/LAC (SUNY/Stony Brook), August, 1987.
3. Castaneda Costa, Julio, and Jose Carlos Vera. **Metodos del Financiamiento Privado de la Atencion Medica en Lima Metropolitana** (resumen del informe "Private Health Care Financing Alternatives in Metropolitan Lima, Peru"). HCF/LAC (Lima, Peru), 1987.
4. Mesa-Lago, Carmelo. **Informe Economico sobre la Extension de la Cobertura Poblacional del Programa de Enfermedad-maternidad del IPSS** (with an English summary prepared by the author). HCF/LAC (SUNY/Stony Brook), March, 1989.

St. Lucia

1. Russell, Sharon Stanton. **Exploratory Report: Options for Health Care Financing Studies in St. Lucia.** HCF/LAC (SUNY/Stony Brook), May, 1987.
2. Russell, Sharon Stanton. **Costs of Victoria Hospital, St. Lucia: Study Design.** HCF/LAC (SUNY/Stony Brook), August, 1987.
3. Russell, Sharon Stanton, Gretchen Gwynne, and Michael Trisolini. **Health Care Financing in St. Lucia and Costs of Victoria Hospital.** Research Report No. 5, HCF/LAC (SUNY/Stony Brook), May, 1988.
4. Russell, Sharon Stanton. **Trip Report: St. Lucia** (report on country study follow-up of Feb. 1988). HCF/LAC (SUNY/Stony Brook), March, 1988.

Appendix II

HCF/LAC Country Studies: Background, Objectives, Methods

This appendix, a reference section for readers unfamiliar with the eight country studies carried out under the HCF/LAC regional project, contains brief descriptions, organized alphabetically by country, of the background, objectives and research methods of the eight studies (greater detail on methods can be found in Chapter III). The Appendix does not contain findings and recommendations emanating from the eight studies; these are summarized in Chapters IV-VII, where they are integrated with findings and recommendations from other research studies.

BELIZE

Raymond, Susan Ueber, B. Lewis, P. Meissner, and J. Norris. 1987. **Financing and Costs of Health Services in Belize** (HCF/LAC Research Report No. 2).

Background. Prior to the 1986 HCF/LAC study in Belize, this small Central American country lacked empirical data on the total cost of the health care consumed there, as well as on the unit costs of health services provided at Belize City Hospital (the country's major public hospital). The study, designed to examine both costs and financing patterns in the Belizean health services system, was undertaken at

the initiative of, and in cooperation with, Belizean public health authorities.

Objectives. The initial goal of the study was to establish a cost database for Belize City Hospital, in order to update its user fee schedule. In addition, costs of several other public health institutions in the country were estimated; the management structures and policy alternatives required to implement cost containment and revenue base expansion options in the Belizean public health system were addressed; and a basis for improving linkages among the public, social security, and private health subsectors was provided. A final goal was to assess the adequacy of an annual subvention paid by the Belizean Social Security Board to the country's Ministry of Finance to cover treatment of injured workers at public health facilities.

Methods. The step-down cost allocation procedure (see Ch. III) was used to determine the costs of Belize City Hospital. Key data developed for the hospital included total annual cost, annual operating cost, average total cost per inpatient and per patient day, average operating cost per inpatient and per patient day, and cost per bed day for various hospital wards. Data on the costs and management of other public health facilities, on the Social Security sub-

vention, and on the overall organization and financing of the country's health system were collected through interviews and documentary research.

When the study team attempted to assess the adequacy of the Social Security Board's annual subvention, it was discovered that no differentiation in the use of inpatient or outpatient hospital services for Social Security beneficiaries was available. The team therefore developed simulations showing the combination of services that could be purchased for the amount of the subvention at current public health facility costs.

BOLIVIA

Rosenthal, G., A. Arrazola, G. Crowley, C. Cuellar, and A. Solari. 1988. **Toward Self-Financing of Primary Health Services: A Market Study of PROSALUD in Santa Cruz, Bolivia** (HCF/LAC Research Report No. 6).

Background. PROSALUD — an experimental, private sector, primary health care organization — was originally established, with USAID support, in 1983, to provide PHC for the low-income members of three agricultural cooperatives in the state of Santa Cruz, Bolivia. By the time of the HCF/LAC Bolivia study in 1987, PROSALUD had evolved into a network of health services "modules," each containing at least one health center and (in some cases) satellite health posts as well. These provided outpatient preventive and curative care, deliveries, basic drugs, and lab tests. Payment was either on a fee-for-service basis or through enrollment in a prepaid plan. A mid-term evaluation of PROSALUD identified the need for a market analysis, which was undertaken by the HCF/LAC project at the request of USAID/Bolivia and PROSALUD management.

Objectives. The major objective of the study was to design a market analysis model for estimating the point at which a PHC network such as PROSALUD would become self-financing — that is, would generate sufficient revenues to cover its total costs. A secondary objective was to apply this analytical model, and a corresponding financial planning methodology, to PROSALUD. Thus, while the study drew on a specific effort in Bolivia designed to expand PHC through fee-for-service and prepayment financing, a broader goal of the analysis was to serve as a

more general model for future market analysis of PHC expansion via non-governmental, self-financing alternatives.

Methods. The study focused on the two longest-running PROSALUD modules. First, the demand for health care in the markets served by the two modules, and the potential services delivery capacity of each, were analyzed. Next, a statistical model was developed with which to estimate the probability that an individual with given demographic, economic, and health attributes would utilize the primary health services provided over a given period of time. Such probabilities were then used to determine whether and when a "break-even" point — the point at which a facility's total revenues would equal its total costs, based on projected numbers of prepaid and fee-for-service patients — existed for each module. To ascertain the market possibility of self-financing, the break-even points were related to the predicted demand levels developed earlier.

A year after the original fieldwork, the research was followed up with an analysis of changes that had occurred at the two modules, and within PROSALUD as a whole, as a result of the study. An epilogue to the study reflects this follow-up work.

DOMINICAN REPUBLIC

Gomez, Luis Carlos. 1988. **Household Survey of Health Services Consumption in Santo Domingo, Dominican Republic: Methodology and Preliminary Findings** (HCF/LAC Research Report No. 8).

Bitran, Ricardo A. 1989. **Household Demand for Medical Care in Santo Domingo, Dominican Republic** (HCF/LAC Research Report No. 9).

Background. Prior to the HCF/LAC project's 1987-88 work in the Dominican Republic, no data on the demand for health care in Santo Domingo — potentially very useful to both public and private sector institutions providing health services — were available. The country's Ministry of Health (SESPAS) and USAID/Dominican Republic jointly identified the need for a demand study, and engaged the HCF/LAC project to establish the necessary database via an extensive household survey and then to perform a demand analysis, making econometric esti-

mates of the significance of selected variables in determining patterns of health services utilization.

Objectives. The goal of the first of the two HCF/LAC studies in the Dominican Republic was to design and implement the household survey that would yield the database for future demand analysis. This survey, carried out in Santo Domingo in late 1987, provided information on access to and utilization of health care across the whole spectrum of public and private provider and financing alternatives. The second HCF/LAC study, based on these survey data plus a review of the current structure of the health services delivery system in Santo Domingo, analyzed the demand for "medical care" (defined as curative, non-dental health care provided by a physician) in Santo Domingo, identifying patterns and determinants of public and private health services utilization by households.

Methods. For the household survey, the method used was probabilistic sampling of the population of Santo Domingo, using a survey instrument designed by the HCF/LAC study team. Over eleven thousand individuals, selected from among the 1.8 million inhabitants of Santo Domingo and stratified by socio-economic residential characteristics, were included. Meanwhile, a supply-side study of the Santo Domingo health sector was undertaken to complement the demand-side information provided by the survey and demand analysis.

For the demand analysis, a model of consumer behavior was developed in order to estimate the effects of a number of explanatory variables on two types of household decisions: whether or not to seek medical care in case of illness, and which health subsector to use in obtaining care. In the case of outpatient care, eight explanatory variables (sex, age, social security coverage, household income, education, price of medical care, travel time to health facilities, and type of health problem) were tested for their effect on each of the two dependent variables. This was repeated for inpatient care, with two differences: first, the decision to seek or not to seek inpatient care was not analyzed, since inpatients have relatively little choice about whether or not to seek care; and second, the effects of price on inpatients' choice of subsector were not studied, because the great variety of inpatient treatments and correspondingly small number of observations for each treatment did not permit statistically reliable analysis.

Representatives of the various Dominican health subsectors, academic and research institutions, and US and international organizations discussed the two studies at a two-day workshop, held in Santo Domingo in January, 1989. Workshop participants identified conclusions and drew policy implications from both the household survey and the demand analysis. These were included in the final chapter of the second of the two HCF/LAC reports.

ECUADOR

Gomez, Luis Carlos (ed.). 1987. **Costos de los Servicios Basicos de Salud en Ecuador** (with English Summary) (HCF/LAC Research Report No. 4).

Background. The HCF/LAC project's Ecuador study, an exploratory study of the costs of primary health services in Ecuador, was undertaken in 1986 at the request of the Ecuadorian Ministry of Health, which lacked comparative data on primary health care delivered through the public, social security, and private subsectors.

Objectives. The main goals of the study were a) to test a cost accounting methodology that would permit comparisons among facilities providing PHC in the three Ecuadorian health subsectors; b) to account for all costs incurred in the delivery of PHC at 18 health centers representing the three subsectors; c) to identify the causes of cost variations among these facilities; and d) to explore aspects of the quality of health services, the equity of their distribution, and the relationship of quality and equity to costs.

Methods. Eighteen Ecuadorian PHC facilities were chosen for case study: eight run by the Ministry of Health (MOH), seven by the rural social security program (SSC), and three by private providers. While these facilities were intended to be broadly representative of their subsectors, no statistical inferences about institutional universes were sought.

For the cost analysis, a simplified version of the step-down method was used. This method prorates subsectorial costs in calculating the average annual unit costs of facilities and the average unit costs of health services (see Chapter III). The 1985 total annual cost, including (for MOH and SSC facilities) a proportion of the administrative costs of the provincial and national administrations of the MOH or SSC,

was calculated for each facility. Recurrent and capital costs were calculated separately. Total costs were broken down by standard budget line items and distributed among the activities performed at each facility. The costs of those activities that were not health-specific were then distributed across "final activities," and the average cost of each final activity was calculated by dividing its total annual cost by the number of times the activity was performed in 1985.

The quality of health care provided at the eighteen facilities was assessed through a questionnaire that tested physicians' and auxiliary nurses' knowledge of standard health care procedures. The equity with which services were distributed was established by analyzing the geographic and subsectorial distributions of population and health resources at both the regional and provincial levels.

GUATEMALA

Gwynne, Gretchen (ed.). 1988. **Private Sector Health Care Alternatives for Agricultural Workers on the South Coast of Guatemala** (HCF/LAC Research Report No. 7).

Background. The HCF/LAC Guatemala study was undertaken at the request of USAID/Guatemala, which needed profiles of health care providers currently serving the country's major agro-export region — the South Coast — in order to assess the feasibility of helping to improve health services in this area via private sector initiatives. The South Coast, where export crops are produced on large plantations, was chosen for several reasons. First, it contained a large proportion of low-income Guatemalans; indeed, the region's farm families were among those Guatemalans most in need of health services yet least able — geographically, culturally, or monetarily — to obtain them. Second, the region's economic base was strong, suggesting the possibility of increased private sector health care financing. Finally, the Guatemalan Social Security Institute (IGSS), which at the time of the study covered farm workers only for accidental injury, had recently announced that it was considering implementing two more programs on the South Coast, maternal/child health and general curative care — possibly through private sector facilities.

Objectives. In view of the small number of existing public and social security health facilities on the

South Coast, local observers felt that private sector alternatives might well be preferred on agro-export farms, several of which were already involved in such programs. The purpose of the HCF/LAC study was to assess the feasibility of expanding private sector health care alternatives, by analyzing the organization, coverage, and (where possible) the costs of currently-existing arrangements — both those run by organizations and based at multiple sites, and those run by individuals, many of which were represented by a single health care delivery site. The implementation and sustainability of extended health services were also considered.

Methods. Because the absolute number of private entities providing health services on the South Coast was small, a case study approach was employed. Entities to be chosen as case studies were identified using a system that ranked their potential for extending PHC in the region. The attributes believed to enhance the likelihood that a given PHC delivery arrangement would become an effective vehicle for an extension of care were defined, and the arrangements were assigned points for possession of these attributes. Those with the most points were designated for greater in-depth analysis of their actual ability and willingness to expand their health services.

PERU

Solari, Alfredo, J. Castaneda Costa, G. Crowley, and J. C. Vera. 1987. **Private Health Care Financing Alternatives in Metropolitan Lima, Peru** (HCF/LAC Research Report No. 3).

Background. As in Guatemala, the HCF/LAC Peru study was undertaken at the request of the USAID mission, which needed profiles of existing organizations providing insurance coverage in the Lima/Callao metropolitan area in order to determine the feasibility of encouraging the further development of existing private sector health care financing alternatives.

Until the mid-1970s, the Peruvian Ministry of Health and Social Security Institute had provided relatively good health services to the population of Lima/Callao. However, an influx of rural migrants, combined with increasing urbanization and worsening economic conditions, had curtailed the

government's ability to maintain the quality of these services. As the quality of public services deteriorated, many middle- and even lower-income Peruvians, predominant users of the public system, turned to the private sector for care, most of them paying on a fee-for-service basis. Meanwhile, the combination of rising demand and increasing costs of private care had resulted in significant growth in private health insurance sales, both to individuals and large employers. By the time of the 1987 HCF/LAC study, private sector risk-sharing arrangements in Lima/Callao covered about 8.3 percent of the capital district's population.

Objectives. The twin goals of the study were to identify all existing prepaid, risk-sharing health care plans in Lima/Callao and estimate their potential for growth.

Methods. Through interviews and documentary research, the HCF/LAC study team traced the evolution of health care financing and delivery arrangements in the Lima/Callao area, and identified their current configurations. Basing their estimates on the number of households in Lima/Callao with sufficient after-tax income to participate in a risk-sharing plan and on several factors favoring or discouraging the development of private prepayment schemes, the team then assessed the potential for future growth of prepaid health care in the metropolitan area.

ST. LUCIA

Russell, Sharon Stanton, G. Gwynne, and M. Trisolini. 1988. **Health Care Financing in St. Lucia and Costs of Victoria Hospital** (HCF/LAC Research Report No. 5).

Background. Like the two other HCF/LAC cost studies, undertaken in Belize and Ecuador, the HCF/LAC St. Lucia hospital cost study was done at the request of and with the full cooperation of the host country — most importantly, the St. Lucian Ministry of Health. As in Belize, the fully-accounted-for costs of running the country's major public health facility, the 100-year-old Victoria Hospital, were unknown. The government was considering either renovating this hospital or replacing it with a new facility.

Objectives. As in Belize, the major objective of the St. Lucia study was to analyze the financial costs of all services at Victoria Hospital, which was absorbing a large share of Ministry of Health (MOH) expenditures. Other goals were to document the role of the hospital within the St. Lucian health services system, and — on the basis of the new hospital cost data generated — to provide Victoria Hospital, the Ministry of Health, and the Government of St. Lucia with a series of options for improving cost control at the hospital and, more broadly, for improving the allocation of the country's health care resources.

Methods. Again as in Belize, the step-down cost allocation procedure (see Ch. III) was used to determine the costs of Victoria Hospital. Data on the overall organization and financing of the country's health system, and also on the costs of a government-subsidized, private, non-profit hospital in St. Lucia, were gathered through interviews, primary data collection, and documentary research. In order to determine factors causing inappropriate admissions to Victoria Hospital and to suggest ways to improve the facility's medical records, an assessment of the appropriateness of utilization of the hospital's obstetrical service was conducted, using the appropriateness evaluation protocol (AEP) on 50 obstetrical cases at the hospital.

Appendix III HCF/LAC Final Meeting Participants

(Arlington, VA, June 21-23, 1989)

Latin American and Caribbean Country Representatives

Arrazola, Antonio	PROSALUD, Bolivia
Boulos, Reginald	Private Sector, Haiti
Castaneda, Maria Esperanza	IPSS, Peru
Castillo, Marco Antonio	SEGEPLAN, Guatemala
Cordova, Cesar	SSC, Ecuador
Cuellar, Carlos Javier	PROSALUD, Bolivia
Duarte, Isis	IEPD, Dominican Republic
Fairweather, Douglas	MOH, Belize
Gill, Llewelyn	MOH, St. Lucia
Moncayo, Edgar	MOH, Ecuador
Reynoso, Jorge	MOH, Peru
Tapper, Al	MOH, Jamaica

USAID Mission Representatives

Dowding, Sam	Belize
Hartenberger, Paul	Bolivia
Scholl, Edward	Peru

Washington, D. C. Area Participants

Abramson, Sue	AID
Collins, David H.	MSH
Crowley, Gail Marie	MSCI
Dickerman, Sam	MSH
Lewis, Maureen	Urban Institute
Moser, Patricia	AID (HCF/LAC Project Manager)
Petersen, Karen	IDB
Pinto de la Piedra, Matilde	John Snow, Inc.
Rosenberg, Elca	World Bank

HCF/LAC Advisory Committee

Musgrove, Philip	PAHO
Randlov, Allen	AID
Rosenthal, Gerald	REACH
Strumpf, George	HIPGNY

HCF/LAC Consultants

Bitran, Ricardo	Abt Associates, Inc.
Garcia de Paredes, Gaspar	Medical School, Univ. of Panama
Gomez, Luis Carlos	PUJ, Colombia
Robertson, Robert L.	Mt. Holyoke College
Solari, Alfredo	MOH, Uruguay
Trisolini, Michael G.	Boston University

SUNY Staff

Bloom, Reynold J.	SUNY/International Programs
Gwynne, Gretchen	HCF/LAC Research Associate
King, Shirley	HCF/LAC Management Officer
Zschock, Dieter K.	HCF/LAC Project Director

Bibliography of Selected Sources

CODE:

- (G) = Guides and reviews
- (P) = Health system and policy studies
- (C) = Cost studies
- (D) = Demand studies
- (A) = Studies of health financing alternatives
- * = Research studies whose findings are summarized in Chapters IV-VI

- AID (United States Agency for International Development) (P)
1986a (December). **AID Policy Paper: Health Assistance** (revised).
Washington, DC: AID.
- 1986b (July). **Health Financing Guidelines**. Washington, DC: AID. (P)
- Akin, John S., D.K. Guilkey, C.C. Griffin, and B. M. Popkin (G)
1985. **The Demand for Primary Health Services in the Third World**.
Totowa, NJ: Rowman and Allanheld.
- ALICO (American Life Insurance Company) *(A)
1987 (September). **ALICO Dominican Republic Feasibility Study**. Santo
Domingo, Dominican Republic: ALICO.
- Birch and Davis Associates, Inc. (P)
1986. **Report for the 1986 Workshop** (report of AID/LAC/DR Health
Officers' Workshop). Silver Spring, MD: Birch and Davis Associates, Inc.

- Bitran, Ricardo A. (G)
 1988 (February). **Health Care Demand Studies in Developing Countries: A Critical Review and Agenda for Research** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc.
- 1989 (March). **Household Demand for Medical Care in Santo Domingo, Dominican Republic** (HCF/LAC Research Report No. 9). SUNY/Stony Brook, NY: HCF/LAC. *(D)
- Brenzel, Logan E. (G)
 1987 (March). **Planning the Financing of Primary Health Care: Assessing Alternative Methods** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc.
- Cleland, Catherine (A)
 1984 (Oct.). **Possibilities for HMO-Type Organizations in Less Developed Countries** (unpubl. ms.). Washington, DC: Office of Health Maintenance Organizations, Health Resources and Services Administration, Department of Health and Human Services.
- Colon, Dominique, A. Fairbank, J. Norris, and S. Raymond (P)
 1989 (January). **Health and Development in Belize: A Sector Assessment** (report prepared for the PRITECH project). Arlington, VA: Management Sciences for Health.
- Cumper, George (G)
 1986 (Spring). **Health Sector Financing: Estimating Health Expenditure in Developing Countries** (EPC Publication No. 9). London: EPC (Evaluation and Planning Centre for Health Care, London School of Hygiene and Tropical Medicine).
- de Ferranti, David (A)
 1984. **Strategies for Paying for Health Services in Developing Countries.** *World Health Statistics Quarterly* 37(4):428-450.
1985. **Paying for Health Services in Developing Countries: An Overview** (World Bank Staff Working Paper No. 721). Washington, DC: The World Bank. (P)
- Evans, John R., K. L. Hall, and J. Warford (P)
 1981. **Health Care in the Developing World: Problems of Scarcity and Choice.** *New England Journal of Medicine* 305(19):1117-1127.
- Fiedler, John L. (P)
 1986 (July). **An Economic Analysis of Segments of the Public Health Sector of El Salvador** (report prepared for USAID/El Salvador). Silver Spring, MD: Birch and Davis Associates, Inc.
- Fox, Peter D., and L. Heinen (A)
 1987. **Determinants of HMO Success.** Ann Arbor: Health Administration Press Perspectives.

- Garrison, Louis P., Jr., and G. P. Wilensky *(A)
 1985 (March). **Alternatives for Financing Health Care in Jamaica: A Preliminary Analysis**. Atlanta, GA: Project HOPE, Center for Health Affairs.
- Gertler, Paul, L. Locay, and W. Sanderson *(D)
 1987. **Cuotas a los Usuarios de los Servicios de Salud: Analisis de Sus Efectos Potenciales en el Perú**. In *M. R. McGrover* 1987b, *op. cit.*, pp. 635-655.
- Gilson, Lucy (P)
 1988 (Spring). **Government Health Care Charges: Is Equity Being Abandoned? A Discussion Paper** (EPC Publication No. 15). London: EPC (Evaluation and Planning Centre for Health Care, London School of Hygiene and Tropical Medicine).
- Gomez, Luis Carlos *(C)
 1987 (ed.). **Costos de los Servicios Basicos de Salud en Ecuador (with English Summary)** (HCF/LAC Research Report No. 4). SUNY/Stony Brook, NY: HCF/LAC.
1988. **Household Survey of Health Services Consumption in Santo Domingo, Dominican Republic: Methodology and Preliminary Findings** (HCF/LAC Research Report No. 8). SUNY/Stony Brook, NY: HCF/LAC. *(D)
- Griffin, Charles C. (G)
 1988. **User Charges for Health Care in Principle and Practice** (Economic Development Institute Seminar Paper No. 37). Washington, DC: The World Bank.
- Griffiths, Adrian, and M. Mills (G)
 1983. **Money for Health: A Manual for Surveys in Developing Countries**. Geneva: Sandoz Institute for Health and Socio-Economic Studies.
- GHAA (Group Health Association of America, Inc.) (G)
 1985. **Managed Prepaid Health Care in Latin America and the Caribbean: A Critical Assessment** (Vols. I-III). Washington, DC: GHAA.
- Gwynne, Gretchen (ed.) *(A)
 1988. **Private Sector Health Care Alternatives for Agricultural Workers on the South Coast of Guatemala** (HCF/LAC Research Report No. 7). SUNY/Stony Brook, NY: HCF/LAC.
- Habis, Antoine M. *(A)
 1984 (January). **Private Sector Health Assessment, Part I: Bringing Health to Ecuador's Poor through Private Sector Initiatives**. Washington, DC: AID.
- Hamilton, Trevor, and M. A. Hinchcliffe *(C)
 1988 (February). **Cost-effective Management of Health Services in Belize, Grenada, St. Kitts-Nevis, and St. Lucia**. Kingston, Jamaica: University of the West Indies.

- Hoare, Geoff, and A. Mills (G)
 1986. **Paying for the Health Sector: A Review and Annotated Bibliography of the Literature on Developing Countries** (EPC Publication No. 12). London: EPC (Evaluation and Planning Centre for Health Care, London School of Hygiene and Tropical Medicine).
- IDB (Interamerican Development Bank) (P)
 1988. **Economic and Social Progress in Latin America: 1988 Report**. Washington, DC: IDB.
- IDS (Information Data Systems, Inc.) (P)
 1989. **Report of the 1989 Workshop** (report prepared for AID/LAC/DR Health Officers' Workshop). Silver Spring, MD: Information Data Systems, Inc.
- Jeffers, James R., T. Weinberg, C. Cleland, and A. B. Kele (P)
 n.d. **Health Sector Resources Management** (report prepared for the Health Sector Resources Management Project, Improved Health Resource Management Component). Bridgetown, Barbados: USAID/RDC/C.
- Jimenez, Emmanuel (G)
 1987. **Pricing Policy in the Social Sectors: Cost Recovery for Education and Health in Developing Countries**. Baltimore, MD: Johns Hopkins University Press.
- Lewis, Maureen A. (A)
 1983 (April). **The Private Sector and Health Care: The Rationale and Role for Pre-Payment Schemes in LDCs** (unpubl. ms.). Washington, DC: AID (Bureau for Program and Policy Coordination).
- 1987a. **The AID Experience in Health Care Financing, 1978-1986** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc. (G)
- 1987b. **The Hospital User Fee Experience in the Dominican Republic** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc. *(A)
- 1988a (April). **The Private Sector and Health Care Delivery in Developing Countries: Definition, Experience, and Potential** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc. (A)
- 1988b (November). **Financing Health Care in Jamaica**. Washington, DC: The Urban Institute. (P)
1989. **Government Policy and the Effectiveness of User Charges in Jamaican Hospitals** (report prepared for the Resources for Child Health project). Washington, DC: The Urban Institute. *(A)
- Mach, E.P., and B. Abel-Smith (G)
 1983. **Planning the Finances of the Health Sector: A Manual for Developing Countries**. Geneva: WHO.

- McFarlane, Dennis H.C., and C. McFarlane *(D)
 1987 (December). **Appraisal of and Analytical Report on a Survey on New Initiatives in Health Finance and Administration** (report prepared by McFarlane Consultants for Statistical Institute of Jamaica). Kingston, Jamaica: McFarlane Consultants.
- Mesa-Lago, Carmelo *(A)
 1988. **Informe Economico sobre la Extension de la Cobertura Poblacional del Programa de Enfermedad-Maternidad del IPSS** (an HCF/LAC Technical Report). SUNY/Stony Brook, NY: HCF/LAC.
- MSH (Management Sciences for Health) (P)
 1984. **Proceedings: Health Officers' Conference, Bureau for Latin America and the Caribbean** (report prepared for AID/LAC/DR/HN). Boston, MA: MSH.
1985. **Final Report on the Study of Financial Alternatives to Support Extension of Basic Health Services in Honduras** (unpubl. draft). Chevy Chase, MD: University Research Corporation. *(A)
- Musgrove, Philip (D)
 1983. Family Health Care Spending in Latin America. **Journal of Health Economics** 2(3):245-257.
- 1985 (August). Reflexiones sobre la Demanda por Salud en America Latina. **Cuadernos de Economia** 22(66):293-305. (D)
- 1987a. The Economic Crisis and its Impact on Health and Health Care in Latin America and the Caribbean. **International Journal of Health Services** 17(3):411-441. (P)
- 1987b (December) (ed.). **Economia de la Salud** (numero especial). **Boletin de la Oficina Sanitaria Panamericana** 103:6. (P)
- 1988 (November) (ed.). **Crisis Economica y Salud: La Experiencia de Cinco Paises Latinoamericanos en los Anos Ochenta** (unpubl. draft doc.). Washington, DC: PAHO. (P)
- O'Connor, Patricia, W.E. Bertrand, and A. Bayona (D)
 1985 (December). **Primary Health Care Planning: Health Status, Health Services Utilization, and Community Financing — San Julian, Mineros, and Santa Cruz, Bolivia** (unpubl. ms.). Chevy Chase, MD: University Research Corporation.
- OECD (Organization for Economic Cooperation and Development) (G)
 1985. **Measuring Health Care, 1960-1983: Expenditure, Costs and Performance** (OECD Social Policy Studies No. 2). Paris: OECD.

- Overholt, Catherine *(A)
 1987 (November). **User Fees in Honduran Hospitals and Health Centers: Policy and Experience** (report prepared for the Resources for Child Health project). Arlington, VA: John Snow, Inc.
- PAHO (Pan American Health Organization) (G)
 1984. **Policies for the Production and Marketing of Essential Drugs** (Scientific Publication No. 462). Washington, DC: PAHO.
- Petrera Pavone, Margarita (P)
 1987. **Eficacia y Eficiencia de la Seguridad Social en Relacion con el Ciclo Economico: El Caso Peruano**. In Musgrove 1987b (*op. cit.*), pp. 620-634.
- PRICOR (Primary Health Care Operations Research) (D)
 1987 (March). **Community Financing of Primary Health Care: The PRICOR Experience**. Chevy Chase, MD: University Research Corporation.
- Ramirez, Nelson, I. Duarte, and C. Gomez (P)
 1986. **Poblacion y Salud en la Republica Dominicana** (Estudio No. 5). Santo Domingo, Dominican Republic: Instituto de Estudios de Poblacion y Desarrollo.
- Raymond, Susan Ueber, B. Lewis, P. Meissner, and J. Norris *(C)
 1987. **Financing and Costs of Health Services in Belize** (HCF/LAC Research Report No. 2). SUNY/Stony Brook, NY: HCF/LAC.
- REACH (Resources for Child Health Project) (G)
 1987. **ANE (Africa/Near East) Bureau Guidance for Costing of Health Service Delivery Projects: Background and Guidance**. Arlington, VA: John Snow, Inc.
- 1989 (July). **Annotated Compilation of Health Care Financing Activities in the Latin American and Caribbean Region, 1982-1988** (draft). Arlington, VA: John Snow, Inc. (G)
- Reynolds, Jack, and K. C. Gaspari (G)
 1985 (May). **Cost-Effectiveness Analysis** (PRICOR Monograph Series, Methods Paper No. 2). Chevy Chase, MD: University Research Corporation.
- Rice, James A., T. C. Ramey, and L. D. McGriff *(A)
 1985. **Privatization Options in Jamaica Health Sector** (an exploratory research study for the Bureau of Private Enterprise, AID). Minneapolis: Health Central International, Inc.
- Robertson, Robert L. (G)
 1985 (November). **Review of Literature on Costs of Health Services in Developing Countries**. Washington, DC: The World Bank.
- Robertson, Robert L., and D. K. Zschock (G)
 1979. **Guidelines for Analysis of Health Sector Financing in Developing Countries** (International Health Planning Methods Series, No. 8). Washington, DC: Office of International Health, United States Department of Health, Education and Welfare.

- Roemer, Milton I. (P)
1986 (January). **The Changeability of Health Care Systems: Latin American Experience.** *Medical Care* 24(1):24-29.
- Rosenthal, G., A. Arrazola, G.M. Crowley, C. Cuellar, and A. Solari *(A)
1988. **Toward Self-Financing of Primary Health Services: A Market Study of PROSALUD in Santa Cruz, Bolivia (with Epilogue)** (HCF/LAC Research Report No. 6). SUNY/Stony Brook, NY: HCF/LAC.
- Russell, Sharon Stanton, and J. Reynolds (G)
1985 (May). **Operations Research Issues: Community Financing** (PRICOR Monograph Series, Issues Paper 1). Chevy Chase, MD: University Research Corporation.
- Russell, Sharon Stanton, and D. K. Zschock (G)
1986. **Health Care Financing in Latin America and the Caribbean: Research Review and Recommendations** (HCF/LAC Research Report No. 1). SUNY/Stony Brook, NY: HCF/LAC.
- Russell, Sharon Stanton, G. Gwynne, and M. Trisolini *(C)
1988. **Health Care Financing in St. Lucia and Costs of Victoria Hospital** (HCF/LAC Research Report No. 5). SUNY/Stony Brook, NY: HCF/LAC.
- Shepard, Donald S., and E. R. Benjamin (A)
1988. **User Fees and Health Financing in Developing Countries: Mobilizing Financial Resources for Health.** In Bell, David E., and Michael R. Reich (eds.): **Health, Nutrition, and Economic Crises: Approaches to Policy in the Third World**, pp. 401-424. Dover, MA: Auburn House Publishing Co.
- Shepard, Donald S., R. L. Robertson, C.S.M. Cameron III, P. Saturno, M. Pollack, J. Manceau, P. Martinez, P. Meissner, and J. Perrone *(C)
1989 (March). **Cost-Effectiveness of Routine and Campaign Vaccination Strategies in Ecuador** (unpubl. ms.). Cambridge, MA: Harvard Institute for International Development.
- Solari, Alfredo, J. Castaneda Costa, G. M. Crowley, and J. C. Vera *(A)
1987. **Private Health Care Financing Alternatives in Metropolitan Lima, Peru** (HCF/LAC Research Report No. 3). SUNY/Stony Brook, NY: HCF/LAC.
- Stinson, Wayne (G)
1982. **Primary Health Care Issues: Community Financing.** Washington, DC: American Public Health Association.
1985. **Employer-supported Health Care in Developing Countries.** (A)
Washington, DC: American Public Health Association.
- TRITON *(A)
1985 (July). **A Feasibility Study and Development Plan for a Private Alternative Health Service Delivery Model in Ecuador** (report submitted to USAID/Ecuador). Quito: USAID/Ecuador.

- Ugalde, Antonio (A)
 1985. The Integration of Health Care Programs into a National Health Service. In Mesa-Lago, Carmelo (ed.): **The Crisis of Social Security and Health Care: Latin American Experiences and Lessons** (Latin American Monograph and Document Series No. 9), pp. 109-142. Pittsburgh: Center for Latin American Studies, University of Pittsburgh.
- USAID/Belize and PAHO (P)
 1982. **Belize Health Sector Assessment**. Belize City: USAID and PAHO.
- USAID/Honduras (P)
 1980 (June). **Assessment of the Public Health Sector in Honduras**. Tegucigalpa: USAID.
- World Bank (P)
 1980 (February). **Health Sector Policy Paper**. Washington, DC: The World Bank.
1987. **Financing Health Services in Developing Countries: An Agenda for Reform** (a World Bank policy study). Washington, DC: The World Bank. (P)
- WHO (World Health Organization) (G)
 1978. **Financing of Health Services** (World Health Organization Technical Report Series, No. 625). Geneva: World Health Organization.
- Zschock, Dieter K. (G)
 1979. **Health Care Financing in Developing Countries** (APHA International Health Programs Monograph Series, No. 1). Washington, DC: American Public Health Association.
1980. **Health Care Financing in Central America and the Andean Region: A Workshop Report**. *Latin American Research Review* XV(3):149-168. (P)
1986. **Medical Care under Social Insurance in Latin America**. *Latin American Research Review* XXI(1): 99-122. (G)
- 1988 (ed.) **Health Care in Peru: Resources and Policy**. Boulder, CO: Westview Press. (P)
- Zukin, Paul, and Theodore J. Weinberg *(A)
 1986 (March). **Proposed Trelawny Health Plan: Preliminary Assessment of a Managed Prepaid Health Service Organization for Trelawny Parish**. Piedmont, CA: Health Management Group, Ltd.

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